SUPREME COURT OF THE UNITED STATES.

No. 242.

WILLIAM N. WHITELEY, JEROME FASSLER, AND OLIVER S. KELLY, APPELLANTS,

vs.

WILLIAM A. KIRBY AND DAVID OSBORN.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE SOUTHERN DISTRICT OF OHIO.

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1 At a circuit court of the United States within and for the sixth circuit and southern district of Ohio, begun and held at the court-house in the city of Cincinnati, on the first Tuesday, being the second day of October, in the year of our Lord one thousand eight hundred and sixty-six.

Present: The Honorable Humphrey H. Leavitt, one of the judges of said court. The following proceedings were had:

Bill.

WILLIAM A. KIRBY & DAVID OSBORN
vs.
WILLIAM N. WHITELEY, JEROME FASSLER, and Oliver S. Kelly. } Chancery.

Be it remembered, that heretofore, to wit, on the twenty-sixth day March, in the year of our Lord one thousand eight hundred and sixty-three, came the complainants, by their counsel, and filed in the clerk's office of said court their certain bill in chancery against the respondents, which said bill is in the words and figures following, to wit:

To the judges of the circuit court of the United States for the southern district of Ohio:

William A. Kirby and David M. Osborn, each being a citizen of the State of New York, bring this their bill against William N. Whiteley, Jerome Fassler, and Oliver S. Kelly, each being a citizen of the State of Ohio, and inhabitants and residents of said southern district of Ohio. And thereupon your ora-

2 tors complain and say, that as they have been informed and believe, heretofore, and before the tenth day of February, one thousand eight hundred and fifty-two, one Byron Dinsmore, then a citizen of the United States, and an inhabitant of the town of Sweden, in the county of Monroe, and State of New York, was the original and first inventor or discoverer of certain new and useful improvements in reaping machines for cutting wheat and other small grains; that being such inventor, he, the said Byron Dinsmore, duly made application in writing to the Commissioner of Patents of the United States for the granting of letters patent of the United States to him, the said Byron Dinsmore, for his said invention and improvements, and duly verified, with his own oath, the specifications for that purpose. That said improvements were not, nor was either of them, at the time of the said application, in public use, or on sale with the consent or allowance of the said Byron Dinsmore, as the inventor or discoverer thereof, contrary to the provisions of the statutes of the United States in such case made and provided, and were not, nor was either of them, known or used by others, anterior to the discovery thereof by him the said Byron Dinsmore. That he, the said Byron Dinsmore, duly complied, in all respects, with all the necessary conditions and requirements of the statutes of the United States, and the rules and regulations of the Patent Office in such cases applicable, prior to the granting of the letters patent herein-

3 after mentioned to him, the said Byron Dinsmore. That on the tenth day of February, one thousand eight hundred and fifty-two, letters patent of the United States, bearing date on that day, were issued to him, the said Byron Dinsmore, according to law, whereby there was granted to him, his heirs, administrators, or assigns, for the full term of fourteen years from the said tenth day of February, one thousand eight hundred and fifty-two, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said *the said* improvements, a description whereof was given in the words of the said Byron Dinsmore, in a schedule which was annexed to the said letters patent, and was made a part thereof. That the said letters patent were issued in the name of the United States of America, and were sealed with the seal of the Patent Office of the United States, and were signed by the Secretary of the Interior, and countersigned by the Commissioner of Patents, and were issued to the said Byron Dinsmore, as will more fully appear by the production of a duly certified copy of the same, and of the schedule annnexed thereto, and to which, when produced, your orators, for greater certainty, beg leave to refer. That before the said Byron Dinsmore obtained the said letters patent, a written description of his invention or discovery, and of the manner and process of making, constructing, and using the same, in such full, clear, and exact terms as to enable any person skilled in the art or

4 science to which it appertains, or with which it is most nearly connected, to make, construct, and use the same; and also therein particularly specified and printed out the part improvement, or combination, which he, the said Byron Dinsmore, claimed as his own invention or discovery. That he, the said Byron Dinsmore, accompanied the said description with a model of his said invention. That the said description was signed by the said Byron Dinsmore, and was attested by two subscribing witnesses, and was duly filed, and said model duly deposited in the said Patent Office of the United States, at Washington. And he, the said Byron Dinsmore, duly made oath, before a person authorized to administer oaths in such cases, that he did verily believe that he was the original and first inventor or discoverer of the said improvements; that he did not know or believe that the same was ever before known or used, and that he was a citizen of the United States. That before he obtained said letters patent, he, the said Byron Dinsmore, paid into the Treasury of the United States the sum of thirty dollars. And your orators further show upon their own knowledge, that after he, the said Byron Dinsmore, so as aforesaid obtained said letters patent, and on or about the second day of July, one thousand eight hundred and fifty-nine, he, the said Byron Dinsmore, by a writing under his hand and seal, duly executed and attested by two subscrib-

5 ing witnesses, and for a valuable consideration paid to him by your orators, duly granted, assigned, and set over unto your orators, their executors, administrators, and assigns, the said letters patent, and all his right, title, and interest in and to the said invention and letters patent so granted to him, and all the rights,

privileges, and immunities secured to him thereby: to have and to hold the same unto your orators, their executors, administrators, and assigns, in as full and ample a manner, to all intents and purposes, as he might have or hold the same were such assignment not executed; as by the said assignment in writing, now in the hands of your orators, duly executed by said Byron Dinsmore under his hand and seal, and duly attested by two attesting witnesses, and ready to be produced, as this court shall direct, will more fully and at large appear, and to which, when produced, your orators beg leave to refer for the contents thereof. That said assignment was afterwards, and on the twenty-eighth day of July, one thousand eight hundred and fifty-nine, duly recorded in said Patent Office, in liber G[5], page 312, of transfer of patents, as appears by an endorsement thereon to that effect, and to which, when produced, your orators pray leave to refer.

And your orators further show and aver, that after they, so as aforesaid, became the owners of said letters patent and of said invention, and previous to the 28th day of January, 1862, they, your
6 said orators, finding and having become satisfied that said letters patent were inoperative, fully to secure the invention of the said Byron Dinsmore to him and his assigns, by reason of a defective or insufficient specification and claim, and that such error or defect had arisen by the inadvertence, accident, or mistake of the said Byron Dinsmore, and without any fraudulent or deceptive intention on his part, they, your orators, did, previous to the said 28th day of January, 1862, duly and in accordance with the statutes of the United States, and the rules and regulations of the Patent Office in such case made and provided, surrender the said patent for the purpose of having the said defective or insufficient specification and claim amended and corrected, soas to more particularly, truly, and correctly describe and specify the same invention and improvement, so as aforesaid, made and discovered by him, the said Byron Dinsmore, and *and* to have new letters patent issued therefor. And your orators did at the same time pay into the Treasury of the United States the further sum of thirty dollars, as by law required; and thereupon, and on the twenty-eighth day of January, one thousand eight hundred and sixty-two, and after the matter had been fully examined and investigated by the Commissioner of Patents, a new patent, bearing date the day and year last aforesaid, was duly issued to your orators, on an amended and corrected specification and claim, for the said invention and improvements so as aforesaid made and discovered by him,
7 the said Byron Dinsmore, for the term of fourteen years from the said tenth of February, one thousand eight hundred and fifty-two, of which last-mentioned letters patent, "Schedule A," hereto annexed, is a copy, and "Schedule B," hereto annexed, is a copy of said amended and corrected specification and claim; and "Schedule C," hereto annexed, is a copy of so much and of such parts of the figures and drawings annexed to said original specifications and claim, as shows the part or parts of said invention or improvements which the said defendants have been and now are infringing, and threaten

hereafter to infringe, by making, using, and vending to others to be used, machines for mowing or reaping, embracing and containing the same material or substantial part or parts thereof, as is hereafter more particularly charged and set forth; and your orators pray that said schedules may be taken as part of this, their bill of complaint.

And your orators show upon information and belief, and allege and charge, that since the said 28th day of January, one thousand eight hundred and sixty-two, and since the reissue of said letters patent to your orators as hereinbefore stated, the said defendants, well knowing, as your orators believe, of the reissue of said letters patent to your orators, and of their rights and privileges secured
8 thereby, and continuing and wrongfully intending to injure your orators in this behalf, and to deprive your orators of the gains, profits, benefits, and advantages which might, and otherwise would have accrued to your orators in that behalf, at Springfield, and at other places in and within said southern district of Ohio, and without the license or permission, and against the will, of your orators, have unlawfully and wrongfully made, or caused to be made, for their joint benefit and advantage, a large number of machines for mowing and reaping, embracing and containing some or all of the inventions and improvements, or some material or substantial part of some or all of such inventions or improvements, so as aforesaid made and discovered by the said Byron Dinsmore, and secured to your orators by said reissued letters patent, and in violation and infringement thereof, and particularly in violation and infringement of those parts of said invention or improvements which are described in said amended and corrected specification, and particularly referred to in the first claim therein made, and which are also shown in and by those parts of the figures and drawings accompanying the said specification and description made and filed by the said Byron Dinsmore, and of which the figures and drawings upon "Schedule C," hereto annexed, are copies.

And your orators further aver, upon information and belief, and so allege and charge, that said defendants have sold a large num-
9 ber of said mowing or reaping machines, so as aforesaid made by them, and embracing said patented inventions and improvements, but of the exact number thereof your orators are ignorant and cannot state; and that they still have a large number thereof on hand and unsold, the exact number whereof is also unknown to your orators.

And your orators further aver, upon information and belief, and so allege and charge, that said defendants are now making, or causing to be made for sale, and threaten to continue to make for sale, and to sell large numbers of such machines for mowing and reaping, which, when completed, will, as your orators verily believe, and they so charge, embrace and contain the same material and substantial parts and portions of said invention and improvements as above specified, and as are embraced and contained in those already made and sold by said defendants, as above mentioned, or some material and substantial part or parts thereof; all which, as your orators

charge and allege, was and is, and if so continued, will continue to do in violation and infringement of the claims, rights, and privileges of your orators, as seemed to them by said reissued letters patent.

And your orators further aver, upon information and belief, and so charge and allege, that they, the said defendants, have
10 made and realized, and are making and realizing, great gains and profits from such manufacture and sale of said reapers so containing and embracing said invention and improvements, but the exact amount thereof is unknown to your orators, charge, upon belief, that the same amounts to several thousand dollars.

And your orators pray that the said defendants may be, by a decree of this court, required to make a full and true disclosure of the number of reaping and mowing machines thus made and sold by them, and of the number thus made and remaining unsold, and of the number in the process of manufacture, which contain any or all or either, or any material and substantial part of any or all or either of said invention or improvements, so secured to your orators by said reissued letters patent, as aforesaid; and that they may be decreed and compelled by this court to disclose and account to your orators, and to pay over to them all such gains and profits which have been made and realized by them by reason of the making, using, or vending to others to be used, of said reaping and mowing machines, so containing or embracing any or all, or either of said patented invention or improvements, or any material or substantial part
11 thereof; and also all such gains and profits of which your orators have been deprived by reason of such sale or use, or vending to others to be used, in and within said district; and that the said defendants, and each and every of them, and their and each and every of their attorneys, solicitors, agents, and servants of each and every of them, may be perpetually enjoined by this court from directly or indirectly making, or causing to be made, or using or causing to be used, or from selling or causing to be sold to others, any machine for reaping or mowing, embracing or containing any or either or any material or substantial part of any or either of said inventions or improvements, so as aforesaid secured to your orators by said reissued letters patent, in any way or manner, or in any place, or under any pretext whatever; and that any such machines for reaping or mowing which contain or embrace any or either of said inventions or improvements, or any material or substantial part of any or either of them, may be forthwith destroyed or delivered up to your orators; and that the defendants may be decreed to pay the costs and expenses of this suit; and that your orators may have such other or further or different relief in the premises as shall be agreeable to equity and good conscience, and as to your honors shall seem meet. To the end, therefore, that the said defendants,
12 if they can show why your orators should not have the relief hereby prayed, and may upon their several and respective corporal oaths, and according to the best and utmost of their several and respective knowledge, remembrance, information, and belief, full, true, direct, and perfect answer make to such of the several

interrogations hereinafter numbered and set forth, as by the note hereunder written, they are respectively required to answer, that is to say:

1. Whether they, the said defendants, have been engaged in business as copartners, doing business under the firm name of Whiteley, Fassler & Kelly, or otherwise; and if otherwise, how otherwise, and at what place or places since the 30th day of January, 1862.

2. Whether they, or any or either, and which of them have made, or caused to be made, or sold, or caused to be sold, in or within the southern district of Ohio, since the said 28th day of January, 1862, any machines for reaping or mowing; and if so, where and how many have they thus made, or caused to be made, and how many have they thus sold, or caused to be sold, since said day.

3. Whethey they, or any or either of them, and which of them, have, at the time their several answers hereto shall be verified, any machine for reaping or mowing in process of manufacture, or then unfinished; and if so, how many, and whether they, or any, or either; and if so, which of them intend to continue such manufacture or sale; and if so, where, and to what extent. Whether any of such machines which have been so made, or have been so sold, or yet
13 remain on hand; and if any, how many of each contain or embrace all or any part, and if not all, which or what part of the invention or improvements described in the said amended and corrected specification, and therein claimed as the invention of the said Byron Dinsmore, and which claim is therein made in the words following, that is to say:

1st. Hanging the driving wheel in a supplementary frame or its equivalent, which is hinged at one end to the main frame, while its opposite end may be adjusted and secured at various heights, or be left free as desired, whereby the cutting apparatus may be held at any desired height for reaping, or be left free to accommodate itself to the undulations of the ground for mowing, substantially as described in said amended and corrected specification, meaning, or if said defendants shall claim that they do not use the said invention or improvement, as thus claimed and described; that they then and in that case, state, describe, and explain wherein and how the corresponding part or parts of the machines thus made and sold by them, differ or vary from the parts of the machine as thus claimed to be constructed by your orators, as the same is herein, in this interrogation above described.

5. Whether they, or any, or either of them, have made any gains or profits; and it so, how much upon the average of each machine so made and sold since the said 28th day of January, 1862.

6th. Whether they, or any, or either, and which of them,
14 have any knowledge, information, or belief; and if so, what in regard to the issuing of said letters patent to the said Byron Dinsmore, or of the assignment of said letters patent, or of said invention, to your orators, or of the reissue of said letters patent to your orators, or if the invention or improvements secured to your orators by said reissued letters patent; and if so, when was such knowledge or information first given or received.

7. And that said defendants may, each and every of them, answer each and every averment and allegation of this your orator's bill, as fully and particularly as if here specially interrogated in regard thereto, and that each and every of the defendant's answer each and every of the above interrogatories. May it please your honors to grant to your orators the writ of supœna ad responendum issuing out of and under the seal of, this court to be directed to the said defendants, William N. Whiteley, Jerome Fassler, and Oliver S. Kelly, commanding them, and each of them, to be and appear in this honorable court, and to make answer to this your orator's bill of complaint, and to perform and abide by such order and decree herein, as to this court may seem required by the principles of equity and good conscience; may it also please your honors to grant unto your orators a provisional or preliminary injunction, issuing out of, and under the seal of this honorable court, enjoining and restraining the said defendants, and each and every of them, and their attorneys, solicitors, agents, and servants, and the attorneys, solicitors, agents, and servants of each and every them, from making, using, or selling, any machines containing the said inventions or improvements so granted and secured to your orators by said reissued letters patent, or any or either of them, or any part thereof, or of any or either of them, and from doing any other act, matter, or thing, to infringe the rights and privileges of your orators, so secured to them by the aforesaid reissued letters patent, during the pending of this litigation. And your orators will ever pray, &c.

WM. A. KIRBY.
MASON and BOMAN,
Complainants' Solicitors.
DAVID WRIGHT,
Of Counsel.

Affidavit.

UNITED STATES OF AMERICA, *Southern district of Ohio, ss:*

On this twelfth day of March, 1863, personally appeared, William A. Kirby, one of the above-named complainants, who, being by me duly sworn, did depose and say that he has read the foregoing bill of complaint subscribed by him, and knows the contents thereof, and that the same is true of his own knowledge, except as the matters therein stated on information and belief; and as to those matters, he believes it to be true.

JOS. H. GEIGER, *Cl'k, &c.*

Security for costs.

I acknowledge myself security for all costs for which the plaintiffs may be liable in this suit.

BENJAMIN H. WARDER.

Schedule A.

"Schedule A" referred to in the annexed bill, and making part thereof, is in the words and figures following, to wit:

Reissue, number 1,262.

THE UNITED STATES OF AMERICA:

To all to whom these letters patent shall come:

Whereas, D. M. Osborn, of Auburn, and Wm. A. Kirby, of Buffalo, New York, assignees of Byron Densmore, of Sweden, and
16 State aforesaid, have alleged that said Byron Densmore invented a new and useful improvement in harvesters, for which letters patent were issued to him, dated February 10, 1852, which letters patent having been surrendered by said assignees, the same have been cancelled, and new letters ordered to issue to them on amended application, which he stated had not been known or used before his application, had made oath that he was a citizen of the United States; that he did verily believe that he was the original and first inventor or discoverer of the said improvement, and that the same had not, to the best of his knowledge and belief, been previously known or used; said assignees having paid into the Treasury of the United States the sum of thirty dollars, and presented a petition to the Commissioner of Patents, signifying a desire of obtaining an exclusive property in the said improvement, and praying that a patent may be granted for that purpose. These are therefore to grant, according to law, to the said D. M. Osborn and W. A. Kirby, their heirs, administrators, or assigns, for the term of fourteen years, from the tenth day of February, one thousand eight hundred and fifty-two, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvement, a description whereof is given in the words of the said D. M. Osborn and W. A. Kirby, in the schedule hereunto annexed, and is made a part of these presents.

17 In testimony whereof, I have caused these letters to be made patent, and the seal of the Patent Office has been hereunto affixed. Given under my hand at the city of Washington, this twenty-eighth day of January, in the year of our Lord one thousand eight hundred and sixty-two, and of the independence of the United States of America the eighty-sixth.

CALEB SMITH,
Secretary of the Interior.

D. P. HOLLOWAY. [L. S.]
Commissioner of Patents.

Countersigned and sealed with the seal of the Patent Office.

Schedule "B."

"Schedule B," referred to in the annexed bill, and making part thereof, is in the words and figures following, to wit:

[Here follows diagram, marked page 17.]

To all whom it may concern:

Be it known that Byron Densmore, of the town of Sweden, in the county of Monroe, and State of New York, assignor to David W. Osborn, of the city of Auburn, and William A. Kirby, of the city of Buffalo and State aforesaid, heretofore invented certain new and useful improvements in harvesting machines: Now, therefore, we, the said David M. Osborn and William A. Kirby, assignees of the whole interest of the said Byron Densmore, as aforesaid, do hereby declare that the following is a full, clear, and exact description of the construction and operation of the said invention and improvements, reference being had to the accompanying drawings making a part of the specification, in which fig. I is a perspective view of the machine; fig. II is a vertical longitudinal section on line x y of figure III; 18 figure three (III) is a top plan of the machine; figure IV is a vertical longitudinal section through the driving wheel, showing the combination of the main and supplemental frames; figure V is a view of the outside of the grooved cam, showing also the rachet wheel; figure VI is an elevation of the guard finger; figure VII is a section of a plate or secondary finger placed intermediate between a portion of the guard fingers to support the sickle or cutters; figure VIII is a view of the back tooth of the rake; figure IX is a view of the outside ground wheel. The nature and principles of the said invention relate 1st, to the construction and combination of two frames—the one for supporting the driving wheel, and the other for supporting the cutting apparatus, and hinging the said frames together in such a manner that the driving wheel and cutting apparatus may each follow the inequalities of the ground independently, and also that they may be bolted rigidly together for supporting the cutting apparatus at any desired height. 2d. In providing a ground wheel with crank and lever for raising and lowering end of the finger bar. Letters of like name and kind refer to like parts in each of the figures.

I represents the main frame of the machine, which consists of several pieces of timber properly framed and bolted together. This frame carries the finger bar and cutting apparatus as herein 19 described. P are two upright posts forming part of the main frame for the purpose of supporting the driver's seat and for forming an adjustable connection with the supplemental or wheel frame. C represents a supplemental frame, in which the driving wheel is hung; it is hinged to the main frame by means of bolt and hinge plate as shown at *d*, so as to allow it to have a hinge or joint-like connection between the two frames, so as to allow an independent movement of each frame. The particular manner of forming the hinge or joint connection is not deemed important, any mechanical

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means by which the end is secured will answer the principle of the invention. The opposite end of the frame moves on the arc of a circle and in close proximity to the upright posts B, so that it may be made fast to said posts by means of bolts passing through said posts and frame at either of the several bolt holes v'', by which means an adjustibility is secured and the cutting apparatus thereby raised and lowered and supported at any desirable height from the ground when reaping. When desired, the adjusting bolts may be removed entirely, and this end of the frame left free to oscillate or swing from its hinges according to the unevenness of the ground over which the driving wheel passes may require. By this combination and connection of the frames it is evident that the driving wheel when moving may pass over uneven surfaces without causing
20 an elevation or depression of the finger bar and cutting apparatus, and the finger bar and cutting apparatus may also conform to the inequality of the ground independently of the position of the driving wheel, and a uniform flexibility between the two frames constantly maintained, the elevation or depression of the driving wheel and the elevation or depression of the cutting apparatus (occasioned by the uneven surfaces of the ground over which the machine passes) not being simuitaneous or dependent one upon the other. The axle of the driving wheel has appropriate bearings upon the side pieces of the supplemental frame as shown at c, figure III. The gear wheels communicating motion to the cutters, as shown at 1, 2, 3, 4, each hung in a common manner upon its appropriate shaft, as shown in figure III.

The ground wheel F, shown in figure I, III, and IX. is hung on the crank h, which crank is supported by boxes on each side of the wheel made fast to the wheel G, or it may be supported on the finger bar or divider, in any convenient manner, so that the wheel may be made to adjust and carry the outer end of the finger bar as desired. One object of hanging this wheel on a crank shaft, with a lever attachment thereto, is to provide a means of conveniently raising and carrying the outer end of the cutting
21 apparatus free from the ground when it is desirable to move the machine from place to place. Another object is to afford the means for raising, lowering, and supporting the outer end of the finger bar and cutting apparatus at different heights from the ground when the machine is used for reaping. The essential feature of this part of the invention is hanging the wheel upon a crank shaft, with the crank and lever for operating the same, so that the purpose of raising and lowering the outer end of the finger bar is attained, the precise details of the arrangement are not deemed important. The finger bar H is made fast to the side pieces of the main frame upon the upper side of the said pieces by bolts or otherwise, as shown at a', so that the inner side piece will serve as an extension shoe or runner to slide over the stubble or mown grass, and protect the heel of the cutters. H^a, driving wheels.

Z draught pole attached to the main frame, and to which the team is harnessed in the common manner. Having thus fully described

the construction and operation of the said improvements, what we claim as the invention of the said Byron Densmore, 1st, hanging the driving wheel in a supplemental frame or its equivalent, which is hinged at one end to the main frame, while its opposite end
22 may be adjusted and secured at various heights, or be left free as desired, whereby the cutting apparatus may be held at any desired height for reaping, or be left free to accommodate itself to the undulations of the ground for mowing, substantially as described.

2d. The employment in a harvesting machine of a wheel, provided with a crank and lever for the purpose of raising and lowering the outer end of the finger bar to cut high or low, substantially as described.

DAVID M. OSBORN.
WM. A. KIRBY.

Witnesses—
CHAS. GARLOCK.
JNO. H. OSBORNE.

And thereupon there issued out of the clerk's office of said court a certain writ of subpœna against the said respondents, directed to the marshal of said district, which is in the words and figures following, to wit:

Subpœna.

UNITED STATES OF AMERICA, *Southern District of Ohio, ss:*

The President of the United States of America to the marshal of the southern district of Ohio, greeting:

You are hereby commanded to summon William N. Whiteley, Jerome Fassler, and Oliver S. Kelly, citizens of, and resident in the State of Ohio, if they be found in your district, to be and appear in the circuit court of the United States for the southern district of Ohio aforesaid, at Cincinnati, on the first Monday in May next, to answer a certain bill in chancery, filed and exhibited in said
23 court against them by William A. Kirby and David M. Osborn, citizens of, and residents in the State of New York; hereof they are not to fail, under the penalty of the law thence ensuing. And have you then and there this writ.

Witness, the Honorable Roger B. Taney, Chief Justice of the United States, this 26th day of March, A. D. 1863, and in the 87th year of the independence of the United States of America.

[SEAL.] Attest: JOS. H. GEIGER, *Clerk.*

Memorandum.

The said defendants are required to enter their appearance in this suit in the clerk's office of said court, on or before the first Monday in May, 1863, otherwise the said bill may be taken pro confesso.

JOS. H. GEIGER, *Clerk.*

Security for costs.

On which said writ is the following endorsement, to wit:

Benjamin Warder acknowledges himself security for all costs for which the plaintiff may be liable in this suit. (See bill.)

And afterwards, to wit, on the first Monday of May, in the year of our Lord one thousand eight hundred and sixty-three, being the time to which said writ was made returnable, came the marshal of said district, to whom the same was in form aforesaid directed, and returned the same into the clerk's office of said court, with his
24 proceedings endorsed thereon, in the words and figures following, to wit:

Marshal's return.

SPRINGFIELD, *March* 31, 1863.

Served the within subpœna on the parties personally by copy.

A. C. SANDS,
U. S. Marshal.

And afterwards, this cause was continued from term to term until the June term, in the year last aforesaid, when the following entry was made upon the journal of said court, as follows, to wit:

WILLIAM A. KIRBY & DAVID M. OSBORN
vs.
WHITELEY, FASSLER & KELLY. } In chancery.

On motion to the court by respondent's counsel, the default for answer herein is hereby set aside, and leave is given the defendants to file their answer herein in thirty days, and this cause is continued.

And afterwards, to wit, on the fourth day of September, in the year last aforesaid, came the respondents, and filed their joint and several answer herein, in the words and figures following, to wit:

Answer.

Circuit court of the United States for the southern district of Ohio.

WILLIAM A. KIRBY and DAVID M. OSBORNE
vs.
WILLIAM N. WHITELEY, JEROME FASSLER, and Oliver S. Kelly. } In chancery.

To the honorable judges of the circuit court of the United States for the southern district of Ohio, in chancery sitting:

The joint and several answer of William N. Whitely, Jerome Fassler, and Oliver S. Kelly, respondents, to the bill of complaint filed in said court against them by William A. Kirby and David M.
25 Osborne, complainants.

These respondents, saving to themselves all exceptions to the many errors and imperfections of complainants' said bill, to so much thereof as they are advised is material, answering, say, that as to the patent of Byron Dinsmore set forth in complainants' bill, respondents are informed and believe that he did obtain a patent, at the time alleged in said bill, for an improvement in *in* reaping machines; but they deny that said Byron Dinsmore was the first and original inventor of said improvement, or that the same was useful or valuable. And as to the averment that complainants became the owners and assignees of said patent of said Byron Dinsmore, defendants have no knowledge, and they ask that the same may be proven to satisfaction of the court. As to the averment of the surrender and reissue of said patent to said Byron Dinsmore, defendants say that said surrender was not made by said Byron Dinsmore, as by law it should have been; that no one but said Dinsmore was by law authorized to make said surrender and obtain such reissue; that if said surrender was made by complainants, (of which fact the defendants
26 have no knowledge, and ask that it may be proven,) such surrender and reissue were void and of no effect. Respondents also deny that said surrender and reissue were for good and lawful cause, as in said bill averred; and they also deny that said reissued patent was for the same invention as the original patent granted to said Byron Dinsmore. Defendants deny that they have ever infringed either said original or reissued letters patent, or that they have ever made, sold, or used reaping or mowing machines containing any or either of the inventions described in said original and reissued letters patent.

Defendants further say, that it is true that they are, and for a long time have been, partners in business under the firm-name of Whiteley, Fassler & Kelley, and have been engaged in making and selling (among other things) reaping and mowing machines, at Springfield, Clark county, Ohio, of which machines, known as "Combined Reapers and Mowers," defendants have made and sold three hundred between Jan'y 2*th, 1862, and March 31st, 1863, when process was served upon them. Said machines were, as to so much of them as is material to the present issue, constructed with a main frame,
27 which carries the working parts of the machine, including all the gearing, except the gear wheel upon the driving wheel. To this main frame, and revolving in *in* relation to it around a common center, which is the pinion, is attached a secondary frame, which carries the driving wheel only. This secondary frame is not left free to play up and down, but is prolonged beyond the driving wheel to a standard in the form of an arc, which rises from the rear of the main frame. This standard is provided at various heights with holes, through which and the end of the said secondary frame a pin passes, which secures said secondary frame, and with it the axle of the driving wheel at certain fixed distances above the main frame. The tongue of the machine is hinged thereto at the front of the main frame; and if the secondary frame were left free to play up and down, so as to accommodate itself to the undulation of the ground,

said main frame would drop upon the ground and the machine be useless. Defendants say that their driving wheel is not hung upon a crank shaft, and that the primary and secondary frames in their combined reapers and mowers are hinged in the opposite direction from that in which they are attached in the machine patented to said Dinsmore; and they say that, in point of fact, the main wheel of said Dinsmore's machine, as described in said patent, is not hung
28 in a supplementary frame, but that said frame is in effect a main frame, and that it carries the gearing as well as the axle of the driving wheel, while it does not revolve about the pinion-shaft.

Defendants, further answering, say, that the three hundred machines made by them, as aforesaid, were of their own invention and ownership, and that they were made under and covered by the following patents belonging to defendants, or invented by others and by them sold and assigned to defendants, or some one of them; that the following are the patents owned or controlled by defendants, under the authority of which, and by virtue of the inventions therein set forth, defendants have heretofore and do now construct their combined reapers and mowers, to wit: The patent of Alfred J. Purviance, for improvements in harvesting machines, dated May 22, 1849; the patent of John K. and Daniel K. Harris, dated November 6th, 1849, for improvement in mowing machines; the patent of John Locke Hardeman, dated August 20th, 1850, for improvement in machines for cutting hemp, and the subsequent reissue thereof; the patent of Thomas S. Steadman, dated May 23d, 1854, since assigned to William N. Whitely, and reissued to him June 19th, 1860; the patent of Abner Whitely, dated April 5, 1855; also, the patent of Abner Whiteley, dated September 19th, 1854, and reissued (reissue No. 304)
29 April 3d, 1855; also, the patents of Abner Whiteley, dated April 24, 1855, Nos. 12,768 and 12,769; also, the patent of Abner Whitely, dated May 1st, 1855; also, the patent of Abner Whiteley, dated July 10, 1855; also, the patent of John Locke Hardeman, issued August 21st, 1855, and since reissued; also, the patent of Abner Whiteley, dated January 10th, 1856; also, the patent of Abner Whiteley, No. 14,212, dated February 5th, 1856; also, the patent of Abner Whiteley, dated March 11, 1856; also, the patent of Abner Whiteley, dated March 25, 1856; also, the patent of William N. Whiteley, jr., dated November 25th, 1856, and since reissued, June 25th, 1861, and entitled reissue 98; also, the patent of William N. and Andrew Whiteley, dated January 18th, 1859; and also the patent of Abner Whiteley, dated August 13th, 1859.

Respondents, further answering, say, that the inventions and improvements set forth in the bill of complant as the invention of said Byron Dinsmore and the property of complainants, and for the infringement of which this suit is brought, were, anterior to the pretended discovery of the same by the said Byron Dinsmore, invented and known by and patented to the following named persons, to wit: to Nelson Platt, of Ottawa, La Salle county, Illinois, who obtained letters patent of the United States therefor, which patent is

now of record in the Patent Office of the United States, said
30 letters patent being dated June 12th, 1849; also to John Dunlap, residing in Walworth county, Wisconsin, who obtained letters patent of the United States therefor, which patent is dated June 26, 1847, and is now of record in the Patent Office of the United States; also, to Martin Butts and Laurette Church, residing in Friendship, Allegheny county, New York, administrators of Damon A. Church, deceased. Lovett H. Obert, of said Friendship, and Weston W. Willoughby, of Chicago, Cook county, Illinois, to whom letters patent of the United States were granted therefor, August 7th, 1847, which letters patent are now of record in the Patent Office aforesaid; also, to Alfred Churchill, of Geneva, Kane county, Illinois, to whom letters patent of the United States were granted therefor March 16th, 1841, which letters patent are now of record in the Patent Office aforesaid; also, to James L. Fountain and Henry K. Fountain, of Rockford, Winnebago county, Illinois, to whom letters patent of the United States were granted therefor May 15, 1849, which patent is now of record in the Patent Office aforesaid; also, to Alfred J. Purviance, of Updegraff. Jefferson county, Ohio, to whom letters patent of the United States were granted therefor on May 22nd, 1849, which patent is now of record in the Patent Office aforesaid; also, to Samuel Krauser, of Reading,
31 Berks county, Pennsylvania, who obtained letters patent of the United States therefor December 18th, 1849, which patent is now of record in the Patent Office aforesaid; also, to William B. Coates, of Big Lick, Roanoke county, Virginia, who obtained letters patent therefor October 15th, 1850, which patent is now of record in the Patent Office aforesaid; also, to Thomas S. Steadman, of , to whom letters patent of the United were granted therefor May 23rd, 1854, which letters patent are now of record in the Patent Office aforesaid.

Defendants further answering, say that the said inventions and improvements set forth in the bill of complaint, as invented by, and patented to, said Dinsmore, and now the property of complainants, and for the infringement of which this suit is brought, were, anterior to the discovery of the same by the said Byron Dinsmore, described in the following applications for letters patent of the United States, filed in the Patent Office of the United States at the dates following, to wit:

In the rejected application of John Krauser, of Reading, Berks county, Pennsylvania, filed July 15th, 1850; in the rejected application of Gifford and Adams, filed in the year 1851, and in the rejected application of Edwin P. Covett, of Philadelphia, Pennsylva-
32 nia, filed in the year 1852.

Defendants further answering, say, that the inventions and improvements set forth in the bill of complaint as the invention of said Byron Dinsmore, and the property of complainants, and for the infringement of which this suit is brought, were, anterior to the pretended discovery thereof by the said Byron Dinsmore, known to the following named persons, and in public use at the following named places, to wit:

Known to Nelson Platt, of Ottawa, La Salle county, Illinois, and in public use by him at and near La Salle; known to John Dunlap, of Walworth county, Wisconsin, and in public use by him in said county; known to Martin Butts, Laurette Church, and Levett H. Obert, of Friendship, Allegheny county, New York, and in public use by them, and by Damon A. Church at and near said Friendship; known to Alfred Churchill, of Geneva, Kane county, Illinois, and in public use by him at and near said Geneva; known to James L. Fountain and Henry K. Fountain, of Rockford, Winnebago county, Illinois, and publicly used by them at and near said Rockford; known to Alfred J. Purviance, of Updegraffs, Jefferson county, Ohio, and publicly used by him at and near said Updegraffs; known to Samuel Krauser and John Krauser, of Reading, Berks county, Pennsylvania, and publicly used by each of them at and near said Reading; known to William B. Coates, of Big Lick, Roanoke county, Virginia, and by him publicly used at and near said Big Lick; known to Jonathan Haines, James Haines, and Ansel Haines, now residing in Pekin, Tazewell county, Illinois, and by said Jonathan Haines publicly used at and near the town of Pekin, Tazewell county, Illinois, and elsewhere in said State of Illinois.

33

And defendants, having full and perfect answer made to complainants' said bill, pray to be allowed to go hence, with their costs.

WILLIAM N. WHITELEY.
JEROME FASSLER.
O. S. KELLY.
SAMUFL S. FISHER,
Solicitor and Counsel for Defendants.

UNITED STATES OF AMERICA,
Southern District of Ohio, ss:

Before the undersigned authority, on the 20th day of August, 1863, personally appeared William M. Whiteley, Jerome Fassler, and Oliver S. Kelly, who, being duly sworn, make oath and say that the facts set forth in the above answer, so far as they are stated of their own knowledge, are true, and so far as they are stated as upon the information and belief of others, they believe them to be true in substance and in fact, as in said answer stated.

Witness, my hand and notarial seal the day and year above written.

[SEAL.] H. KRUDER MOWER,
Notary Public within and for Clarke County, Ohio.

34 *Replication.*

And afterwards, to wit, on the twenty-first day of October, being at the October term of said court, in the year last aforesaid, came the complainants, by their counsel, add filed their replication to the answer of respondents, clothed in the words and figures following, to wit:

Circuit court of the United States for the 7th circuit and southern district of Ohio.

WILLIAM A. KIRBY and DAVID M. OSBORNE
vs.
WILLIAM N. WHITELEY, JEROME FASSLER, and Oliver S. Kelly.

The replication of William A. Kirby and David M. Osborne, complainants, to the answer of William N. Whiteley, Jerome Fassler, and Oliver S. Kelly, defendants.

These repliants, saving and reserving to themselves all and all manner of advantage and exception, to the manifold insufficiencies of said answer for replication thereunto, say that they will aver and prove their said bill to be true, certain, and sufficient in the law to be answered unto, and that the said answer of the said defendants is uncertain, untrue, evasive, and insufficient to be replied unto by these repliants, without this, that any other matter or thing whatever in the said answer contained, material or effectual in the law to be replied unto, confessed, and avoided, traversed or denied as true; all which matters and things this repliant is, and will be ready to prove as this honorable court shall direct; and pray as in and by their said bill they have already prayed.

MASON & BOWMAN,
Complainants' Solicitors.
D. WRIGHT,
Of Counsel.

35 And afterwards, to wit, on the fourth day of February, at the February term of said court, in the year of our Lord one thousand eight hundred and sixty-four, an entry was made upon the journal of said court as follows, to wit:

Entry.

On motion to the court by Samuel S. Fisher, of counsel for respondents, it is ordered that said parties have ninety days from the first day of this term, within which to take testimony in this cause and the same is continued. And afterwards this cause was continued from term to term until the October term of said court in the year of our Lord one thousand eight hundred and sixty-five, when the following order was entered upon the journal. By consent of parties, it is ordered that Daniel M. Cochran, esqr., of Springfield, Ohio, be appointed a special examiner in this cause under the sixty-seventh rule in equity. And afterwards, but at the term last aforesaid, to wit, on the 15th day of January, A. D. 1866, in said term the following entry was made to wit:

Entry.

On motion to the court it is ordered that the continuance in this cause be set aside and that the time for taking testimony therein be extended to the fifteenth day of March next, and cause continued.

And afterwards this cause was continued until the June term
36 in the year last aforesaid, when the following entry was made, to wit:

On motion it is by the court ordered that the time for taking testimony herein be extended to and including the 15th day of June. And afterwards this cause was continued until the October term in the year last aforesaid, when the following decree was entered upon the journal of said court, to wit:

Decree.

WILLIAM A. KIRBY & DAVID M. OSBORNE
vs.
WILLIAM N. WHITELEY, JEROME FASSLER and OLIVER S. KELLY.

This cause having been brought to a final hearing, upon the pleadings and proofs. After hearing Mr. Wright, of counsel for complainants, and Mr. Fisher, of counsel for defendants, and after due deliberation had thereon, on motion of said counsel for said complainants, it is hereby found, ordered, adjudged and decreed by the court, that the reissued letters patent, upon which this suit was brought, and which were granted and issued to the complainants, and which bear date on the 28th day of January, one thousand eight hundred and sixty-two, the original of which was granted to Byron Densmore, and bore date February 10th, one thousand eight hundred and sixty-two, is a good and valid patent and that the said Byron Dinsmore was the original and first inventor, of the improvement described therein, and secured by said reissued letters patent, and that
said William A. Kirby and David M. Osborne, the complain-
37 ants in this suit, are the owners thereof, and that the defendants William N. Whiteley, Jerome Fassler and Oliver S. Kelly have, and each of them has infringed upon the said reissued letters patent, and upon the rights of the complainants secured thereby. It is hereby further ordered, adjudged and decreed, that the said complainants do recover of the said defendants, the profits, gains, and advantages, which they or either or any of them have received or which has arisen or accrued to them, or either or any of them, from the use of said improvements, or any of them, or from the manufacture, use or sale of reaping, or mowing, or combined reaping and mowing machines, containing any of said improvements, or any substantial part thereof. It is further ordered, adjudged, and decreed, that said complainants recover of said defendants their costs, charges, and disbursements in this suit to be taxed. It is further ordered, adjudged, and decreed, that it be referred to John McLean, esq., clerk of this court, who is hereby appointed a master of this court for that purpose, to ascertain and take and state an account of the
gains, advantages, and profits, which said defendants, or any
38 or either of them have received or which have arisen or accrued to them or to any or either of them, from the use of said improvements, or any of them or from the manufacture, use or

sale of reaping, or mowing, or combined reaping and mowing machines, containing any of said improvements or any substantial part thereof. It is further ordered, adjudged, and decreed, that the complainants on such accounting, have the right to cause an examination of said defendants, or any or either of them, under oath or affirmation. and also the production of their books, papers, vouchers, and documents, and that they and each of them attend said master for that purpose from time to time, all as said master shall direct. And afterwards to wit, on the *on the* 30th day of November, in the year last aforesaid, the following entry was made, to wit:

Entry.

This day, came the respondents by their solicitor, and prayed that an appeal be allowed them from the decree heretofore rendered in this cause, to *to* the Supreme Court of the United States, and that security therefor be fixed. Thereupon the court allow such appeal and order respondents to give good and sufficient security to prosecute their said appeal to effect, and answer all damages and costs
39 if they fail to make their appeal good, in the sum of three thousand dollars. And afterwards, but on the same day, came the respondents and *and*filed a certain bond for appeal herein which is in the words and figures following, to wit:

Appeal bond.

Know all men by these presents, that we, Thomas B. Wood and Joseph Whiteley, are held and firmly bound unto William A. Kirby and David M. Osborne, in the penal sum of three thousand dollars, to the payment of which, well and truly to be made, we do by these presents, jointly and severally, bind ourselves, our heirs, executors, and administrators. Sealed with our seals, and dated this 13th day of November, A. D. 1866.

The condition of this obligation is such, that whereas the said Whiteley, Fassler, and Kelly obtained the allowance of an appeal from a certain decree in the circuit court of the United States, seventh circuit and southern district of Ohio, at the October term, 1866, in favor of William A. Kirby and David M. Osborne, in a suit in equity brought by William A. Kirby and David M. Osborne against said Whiteley, Fassler & Kelly, wherein a decree was rendered in favor of the said Kirby and Osborn against the said Whiteley, Fassler, & Kelly. Now, if the said Whiteley, Fassler, and Kelly shall pay the condemnation money and costs, in case the
40 said judgment and the decree of the said circuit court shall be affirmed by the Supreme Court of the United States, in whole or in part, then the above obligation shall be void, otherwise in full force and virtue in law.

THOMAS S. WOOT. [SEAL.]
JOSEPH WHITELEY. [SEAL.]

Witnesses:
THOMAS J. PRINGLE.
AMOS WHITELEY.

STATE OF OHIO, *Clark county, ss:*

Thomas B. Wood and Joseph Whiteley, being sworn, say that they are worth the sum of six thousand dollars, after the payment of their just debts.

(Signed) THOMAS S. WOOD.
JOSEPH WHITELEY.

Sworn to before me, and subscribed in my presence this 30th day of November, 1866.

THOMAS J. PRINGLE,
Notary Public.

Entry.

And afterwards, to wit, on the second day of April, A. D. 1867, the following entry was made:

On motion, to the court, it is ordered that the complainants have leave to modify their decree heretofore entered in this cause; and afterwards, to wit, on the second day of April, A. D. 1867, the following entry was made:

On motion, to the court, it is ordered that complainants have leave to modify their decree heretofore entered in this cause; and afterwards to wit, on the 16th day of April, being at the April term of said court, in the year last aforesaid, an amended decree was entered, clothed in the words and figures following, to wit:

Modified decree.

United States circuit court, southern district of Ohio.

WILLIAM A. KIRBY and DAVID M. OSBORNE
against
WILLIAM N. WHITELEY, JEROME
41 Tassler, and Oliver S. Kelly. } In equity.

It appearing to the court that, on the day upon which the decree in this case was entered, a stipulation was filed by the parties hereto, waiving a reference to a master, and agreeing upon a certain sum as damages and costs, which stipulation was intended to be embodied in said decree, but was by mistake omitted. Now therefore, it is ordered, (both parties agreeing thereto,) that said decree be corrected by striking therefrom so much of it as relates to a reference to a master, and inserting in lieu thereof, the following: And it appearing to the court that the parties have waived a reference to a master, and have agreed that the gains, advantages, and profits of the defendants, for which they are liable in this action, shall be fixed at two thousand five hundred dollars, and that the costs, in this suit, for which the plaintiffs are entitled to recover, the sum of one hundred and fifty-seven dollars and thirty-two cents: it is ordered and adjudged by the court, that the plaintiffs recover

of the defendants, two thousand five hundred dollars damages, and their costs taxed at one hundred and fifty-seven dollars and
42 thirty-two cents, and that execution issue therefor as upon judgments at law.

And it is further ordered, that this correction and entry be made as of the twenty-fourth day of November, 1866.

43 Depositions of Calvin Young and William B. Dunning, taken before H. P. Cook, a justice of the peace and special examiner, and used in evidence in this cause, on behalf of the complainants, in the words and figures following, to wit:

Depositions of sundry witnesses, taken before Horace P. Cook, justice of the peace, on the 29th day of January, 1864, at the office D. M. Osborne & Co., Auburn, N. Y., to be read in evidence in a certain suit in chancery pending in the circuit court of the United States, southern district of Ohio, wherein William A. Kirby and David M. Osborne are complainants, and William N Whitely, Jerome Fassler, and Oliver S. Kelley, are defendants. Present in behalf of the complainants, David Wright, esq'r, and on behalf of the defendants, S. S. Fisher, esq'r.

Calvin Young deposeth:

Calvin Young, of lawful , being first duly cautioned and sworn, deposeth and saith, to the interrogatories proposed, as follows:

Question 1st. By complainant's counsel. What is your age, residence, and occupation?

Answer. My age is 34 years; residence, Auburn, N. Y.; occupation, a machinist, engine and reaper and mower builder.

Question 2nd. By same. How long have you been engaged building reapers and mowers?

Answer. About four years.

Question 3rd. By same. How long as a machinist?

Answer. About 18 years.

Question 4. By same. Please examine defendant's model A, now shown to you, and state whether or not you find therein the
44 construction and combination of two powers, the one for supporting the driving wheel, and the other for supporting the cutting apparatus?

Answer. I have examined it, and find it to contain two frames, one for supporting the driving wheel, and the other the cutting apparatus.

Question 5. By same. Do you or do you not find these frames hinged together in such a manner that the driving wheel and cutting apparatus may each follow the irregularities of the ground independently; also, that they may be bolted rigidly together, for supporting the cutting apparatus at any desired height?

Answer. I do.

Question 6. By same. Do you or do you not find the driving wheel represented in the model hung in a supplementary frame?

Answer. I do.

Question 7. By same. Do you or do you not find that supplementary frame hinged at one end to the main frame?

Answer. I do.

Question 8. By same. Do you or do you not find that its opposite end may be adjusted and secured at various heights, or be left free as desired?

Answer. I do.

Question 9. By same. Do you find these several parts so constructed and arranged that the cutting apparatus may be held at any desired height for reaping, or be left free to accommodate itself to the undulations of the ground for mowing?

Answer. I do.

Cross-examined by S. S. Fisher, esq'r, counsel for defendants.

Question 10. By defendant's counsel. Do you build reapers for yourself or for another; if the latter, for whom?

45 Answer. I have been engaged as a partner in building reapers; at present I am not a partner. I am now building for Routis and Beardsley a machine called the Cayuga Chief, Wheeler's patent.

Question 11. By same. Why do you say that the driving wheel and cutting apparatus in the defendant's model A may follow the undulations of the ground independently of each other?

Answer. From the fact that they both rest upon the ground, with the supplementary frame which holds the driving wheel; not being confined at one end, allows them both to follow any imperfection in the ground.

Question 12. By same. Is not the supplementary frame confined at the end opposite the hing by a screw passing through it and the upright arc?

Answer. It may be or not at pleasure.

Question 13. By same. Do you know how it is used in fact?

Answer. No, sir.

Question 14. By same. When the screw is removed what becomes of the main frame?

Answer. It rests upon the ground at one end; the rear end.

Question 15. By same. What would become of the first end?

Answer. If it had nothing to support it it would rest upon the ground; if the machine was in working order, ready to operate, it would remain suspended?

Question 16. By same. How if the tongue was hinged to the front of the frame?

Answer. There would be nothing to support it if the tongue was hinged.

Question 17. By same. Could the machine be successfully used if the main frame rested on the ground front and

46 rear?

Answer. It cannot be used successfully, but if the draft was sufficient to raise the front end it might be used successfully.

Question 18. By same. Then if the machine has a tongue loosely hinged, would you say that in practice, that it was ever intended the outer end of the supplementary frame should be released from the upright arc in the rear of the machine?

Answer. No, sir.

Redirect examination by complainant's counsel.

Question 19. By complainant's counsel. Would the use of a tongue loosely hinged enable the cutter-bar to follow the undulations of the ground, if the two frames were rigidly attached?

Answer. I think if a machine was properly constructed and balanced it would; but I cannot decide that question from this model.

Question 20. By same. You say in your opinion, if this machine has a tongue loosely hinged, that in that case it was never intended that the outer end of the supplementary frame should be released from the upright arc at the rear of the machine; if that hinged tongue should be made rigid, would it then be used with the outer end of the supplementary frame released from that upright arc in mowing?

Answer. I think it could.

Question 21. By same. You say, in answer to the last question, "I think it could." Would there be any independent action of the two frames, with a rigid tongue, if it were not released?

Answer. No, sir.

47 Question 22. By the same. Then, in that case, would the hinge-bar follow the undulations of the ground?

Answer. I do not think it would.

Further cross-examination by Mr. Fisher:

Question 23. By defendant's counsel. In the case last supposed, would not the movement of the hinge-bar over the undulations of the ground be controlled by the movement of the driving wheel over such undulations?

Answer. Not altogether.

Question 24. By same. To what extent?

It would be controlled by the driving wheel and the end of the pole about equally.

CALVIN YOUNG.

W. B. Dunning deposeth:

Also, at the same time and place, Wm. B. Dunning, who, being first duly cautioned and sworn, deposeth and saith, in answer to interrogatories, as follows:

Question 1st. By comp. counsel. What is your age, residence, and occupation?

Answer. My age is forty-five; residence, Geneva, N. Y.; occupation, machinist.

Question 2nd. By the same. How long have you been a machinist?

Answer. Thirty years.

Question 3rd. By the same. Please examine defendant's model A, now shown to you, and state whether or not you find therein the construction and combination of two frames, the one for supporting the driving wheel, and the other for supporting the cutting apparatus?

Answer. I do.

Question 3½. By the same. Do you or do you not find these two frames hinged together in such a manner that the driving wheel and cutting apparatus may each follow the irregularities of the ground independently; also, that they may be bolted rigidly together for supporting the cutting apparatus at any desired height?

Answer. I do.

Question 4. By the same. Do you or do you not find the driving wheel as represented in that model hung in a supplementary frame?

Answer. I do.

Question 5. By the same. Do you or do you not find that supplementary frame hinged at one end to the main frame?

Answer. I do.

Question 6. By the same. Do you or do you not find that its opposite end may be adjusted and secured at various heights, or be left free as desired?

Answer. I do.

Question 7. By the same. Do you find these several parts so constructed and arranged as that the cutting apparatus may be held at any desired height for reaping, or be left free to accommodate itself to the undulations of the ground for mowing?

Answer. I do.

Cross-examination.

Question 8. By counsel for defendants. If the machine, illustrated by the model A, be drawn forward by a tongue hinged to the fore part of the frame, could it be used for mowing, if the rear end of the supplementary frame were left free?

Answer. If the hinge was of sufficient play, and the diameter of of the wheel was not of sufficient length to keep the frame up from the ground, the machine could not be used in that case.

Question 9. By the same. Would not the usefulness of the machine, if the tongue were hinged at all, be seriourly impaired by allowing free play to the rear end of the supplementary frame?

Answer. I should think not; there may be a small amount of play at the hinge without damaging the machine at all.

Question 11 (10.) By the same. When you say that the machine is so constructed as to allow the finger bar to follow the undulations of the ground, independent of the driving wheel, do you speak upon the supposition, do you not, that the hinge has not play enough to allow the front of the frame to come to the ground?

Answer. I do.

Question 12. By the same. Do you know how this machine is, in fact, operated?

Answer. I have never seen the machine operated.

WM. B. DUNNING.

Justice of the peace certificate.

STATE OF NEW YORK, *Cayuga county, ss:*

I, Horace T. Cook, hereby certify that I am a justice of the peace within and for the aforesaid county and State, acting by consent of

parties as special examiner in the cause named in the caption of these depositions. I further certify, that at the time and place named in the caption, personally appeared before me, the above-named Calvin Young and William B. Dunning, who being by me first sworn to testify the truth, the whole truth, and nothing but the truth, in the cause mentioned in the caption, did respectively subscribe the foregoing depositions in my presence, after the same had been reduced to writing by me, in presence of the witnesses respectively. That said witnesses reside at a greater distance than one hundred miles from Cincinnati, in the southern district of Ohio; and that I
48 am not of counsel or attorney to either of the parties in the cause above named, or otherwise interested in the event thereof.

All which is certified this 29th day of January, A. D. 1864.

HORACE T. COOK,
Justice of the Peace.

Defendant's depositions.

Depositions of Emanuel Riegel, Henry Stickney, Henry Oxtoby, Samuel Shuman, Jimeson W. Haines, Emanuel Reigel, and William Clough, taken before John McLean, examiner, in evidence in this cause, on behalf of defendants, in the words and figures following, to wit:

Circuit court of the United States for the southern district of Ohio.

WILLIAM A. KIRBY and D. M. OSBORNE
vs.
WILLIAM N. WHITELEY, *et al.*
} In equity.

The complainants will please take notice, that on Monday, the 20th day of March, 1865, the defendants will examine sundry witnesses, orally, under the 67th rule, before John McLean, esq'r, one of the examiners in chancery for the circuit court of the United States for the southern district of Ohio, at the clerk's office of said court in Cincinnati, Ohio. The taking of said testimony will commence at 11 o'clock a. m. on said day, and be adjourned from day to day until completed.

SAMUEL S. FISHER,.
Sol'r for Defendants.

Received copy of the above March 13, 1865.

MASON & BOWMAN,
Sol's for Complainants.

WM. A. KIRBY and DAVID M. OSBORNE
vs.
WM. M. WHITELEY, JEROME FASSLER, and Oliver S. Kelly.

United States circuit court, southern district of Ohio, in equity.

Depositions of sundry witnesses taken before me, an exam-
49 iner duly appointed by the circuit court of the United States

Question 3½. By the same. Do you or do you not find these two frames hinged together in such a manner that the driving wheel and cutting apparatus may each follow the irregularities of the ground independently; also, that they may be bolted rigidly together for supporting the cutting apparatus at any desired height?

Answer. I do.

Question 4. By the same. Do you or do you not find the driving wheel as represented in that model hung in a supplementary frame?

Answer. I do.

Question 5. By the same. Do you or do you not find that supplementary frame hinged at one end to the main frame?

Answer. I do.

Question 6. By the same. Do you or do you not find that its opposite end may be adjusted and secured at various heights, or be left free as desired?

Answer. I do.

Question 7. By the same. Do you find these several parts so constructed and arranged as that the cutting apparatus may be held at any desired height for reaping, or be left free to accommodate itself to the undulations of the ground for mowing?

Answer. I do.

Cross-examination.

Question 8. By counsel for defendants. If the machine, illustrated by the model A, be drawn forward by a tongue hinged to the fore part of the frame, could it be used for mowing, if the rear end of the supplementary frame were left free?

Answer. If the hinge was of sufficient play, and the diameter of of the wheel was not of sufficient length to keep the frame up from the ground, the machine could not be used in that case.

Question 9. By the same. Would not the usefulness of the machine, if the tongue were hinged at all, be seriourly impaired by allowing free play to the rear end of the supplementary frame?

Answer. I should think not; there may be a small amount of play at the hinge without damaging the machine at all.

Question 11 (10.) By the same. When you say that the machine is so constructed as to allow the finger bar to follow the undulations of the ground, independent of the driving wheel, do you speak upon the supposition, do you not, that the hinge has not play enough to allow the front of the frame to come to the ground?

Answer. I do.

Question 12. By the same. Do you know how this machine is, in fact, operated?

Answer. I have never seen the machine operated.

WM. B. DUNNING.

Justice of the peace certificate.

STATE OF NEW YORK, *Cayuga county, ss:*

I, Horace T. Cook, hereby certify that I am a justice of the peace within and for the aforesaid county and State, acting by consent of

parties as special examiner in the cause named in the caption of these depositions. I further certify, that at the time and place named in the caption, personally appeared before me, the above-named Calvin Young and William B. Dunning, who being by me first sworn to testify the truth, the whole truth, and nothing but the truth, in the cause mentioned in the caption, did respectively subscribe the foregoing depositions in my presence, after the same had been reduced to writing by me, in presence of the witnesses respectively. That said witnesses reside at a greater distance than one hundred miles from Cincinnati, in the southern district of Ohio; and that I
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United States circuit court, southern district of Ohio, in equity.

Depositions of sundry witnesses taken before me, an exam-
49 iner duly appointed by the circuit court of the United States

for the southern district of Ohio, at the clerk's office of said court, in the city of Cincinnati, on the 21st day of March, A. D. 1865, pursuant to notice hereto attached. This deposition taken in cause above stated on the part of the defendants.

Emanuel Riegel's deposition.

The said Emanuel Riegel, being duly sworn to testify to the truth, the whole truth, and nothing but the truth, relating to the said cause, deposes as follows:

Question 1st. State your name, residence, and occupation.

Answer. My name is Emanuel Riegel; my age, thirty-seven; I reside in Springfield, Ohio; my occupation is that of a machinist; I am in the employ of Whitely, Fassler & Kelly since 1857, except last season.

Ques. 2nd. State what was your department of work during the season of 1862.

Ans. My department was fitting machines together in running order.

Ques. 3rd. State whether or not you put machines together at the shop only, or upon farms of purchasers.

Ans. I put together for farmers every year; some years more, and some less.

Ques. 4. Look at the model A, now shown you, and state how far the brass bolt forward of the pinion, and the brass loop in front of said bolt, show the manner of attaching the tongue to the machines built for the harvest of 1862.

Ans. As to the bolt forward of the pinion, I could not state the exact distance from the pinion, nor the exact distance of the hoop from the bolt. The bolt and loop both are correct as to the mode in which the machines were built; the bolt is in the correct place; but there ought to be a stay from the combination box to the bolt.

50 Ques. 5th. Explain to us how the tongue was attached to the machines built for the harvest of 1862.

Ans. The tongue ran through the loop and hinged on the bolt and played loose in the loop or stirrup when moving.

Ques. 6th. How was the tongue attached for reaping?

Ans. The tongue was attachd for reaping in the same manner, except the bolts were put a little closer together, so that there was very little play; it always had some play.

Ques. 7th. Please to state in what manner the iron yoke, in which the driving wheel is hung, was adjusted when the machine was arrange for reaping and mowing.

Ans. The yoke or wheel frame was adjusted up or down, according to the height of the cut, fastened stationary at any certain point you wished by the pin passing through it into the standard, as shown in the model.

Ques. 8th. State whether or not the pin was ever taken out within your knowledge, or designed to be taken out from the construction of the machine so as to leave the wheel free to move independently

of the main frame, and so as to follow the frame and cutting apparatus to accommodate themselves to the ground independently of the wheel.

Ans. No; that never was the design in that way; if you did take the out, it, the main frame would drop on the ground and never do any cutting.

Ques. 9th. Why would it not cut with the pin out?

Ans. For the reason that there would not be weight enough on the main wheel to drive the knife.

51 Ques. 10th. Was there any difference in the place or manner of attaching the tongue to the machine, built by the defendants in 1859, 1860, 1861, 1862, and 1863? if so, state what it was.

Ans. No, sir; there was not.

Cross-examination:

Ques. 11th. Please describe the stay you speak of in your answer to 4th interrogatory, from the combination box to the bolt, and which is not shown in the model.

Ans. There is a thin piece of iron of about $\frac{3}{8}$ of an inch thick, and about an inch and a half wide, that runs from the combination box to the main bolt that runs through the back part of the tongue that it is hinged on; the use of it is to stay the end of the bolt.

Ques. 12th. How many bolts were used to pass through that loop or stirrup?

Ans. Two.

Ques. 13th. What were the positions of these bolts? How far was the first from the top of the loop, and what the distance between them?

Ans Could not tell the exact distance; from $\frac{1}{2}$ to $\frac{3}{4}$s of an inch from the top of the loop or stirrup; the distance between the bolts was about four inches, as close as they could be put together, as near as I can recollect.

Ques. 14th. What were the uses of these bolts?

Ans. The bolts were used in reaping to adjust the height of the cut some, and raise the platform to the proper angle; in mowing they were not much used; generally used, one at the top and the other at the bottom, to give the tongue a great deal of play.

Ques. 15. What was the length of that loop or stirrup?

Ans. Cannot tell exactly, about 12 inches.

52 Question. 16th. What was the width occupied in the loop by the tongue?

Ans. I think about four or four and a half inches.

Ques. 17th. Did you ever use the defendant's machine in reaping or mowing? and if so, to what extent?

Ans. Well, I have set them up, and started and run them in the field. To start and get them right is the most I have done with them.

Ques. 18th. Were all the machines made by defendants in 1862, combined machines, to use both as reapers and mowers?

Ans. Yes, sir; they were.

Redirect:

Ques. 19th. When the top bolt was passed through the loop from $\frac{1}{2}$ to $\frac{3}{4}$s of an inch from the top, and the bottom bolt was passed through the loop from $\frac{1}{2}$ to $\frac{3}{4}$s of an inch from the bottom, what would be the distance between them? State as near as you can.

Ans. I suppose it would be about 10 inches.

Ques. 20th. How far apart were the holes in the stirrup, and how were the bolts kept in place?

Ans. I think there are about 8 holes through the stirrup, equal distances apart; the bolts are long enough to pass through the stirrup, and there is a spring key to keep them in place.

Ques. 21st. When you speak of the width of the tongue in the loop, which direction do you mean?

Ans. The width of the tongue is the narrow way of the loop.

Ques. 22nd. What is the verticle thickness of the tongue in the loop?

Ans. About three inches.

EMANUEL RIEGEL.

Henry Stickney deposes:

Henry Stickney, being duly sworn, deposes and says:

53 Ques. 1st. What is your name, age, residence, and occupation?

Ans. Henry Stickney; aged 42 years; residence, Springfield, Clark county Ohio; occupation, that of a farmer.

Ques. 2nd. State if you own a combined reaper and mower manufactured by defendants; if yea, state when you bought said machine; how long, and for what you have used it.

Ans. I own one of the combined machines made by defendants; as near as I can recollect, bought it in 1862. I have used it three seasons for reaping and mowing.

Ques. 3rd. State in what respect, if at all, the mode of attaching the main wheel and tongue to the main frame differs from that shown in the model A.

Ans. It does not differ at all, with the exception of the brace from the combination box to the bolt that the tongue hinges upon.

Ques. 4th. Please state how you adjust your machine for reaping, and how for mowing.

Ans. By lessening the vibration of the tongue in the stirrup for reaping, and increasing the vibration of the tongue in the stirrup for mowing by setting the bolts further apart. The wheel frame is raised or lowered as circumstances require, but made stationary at any point required by a pin passing through the wheel frame and standard, which the wheel frame passes up and down on either for reaping or mowing.

Ques. 5th. Please state whether or not the wheel frame is ever left free to move when the machine is at work.

Ans. It is not, that not being the design.

Cross-examined:

Ques. How do you know of that not being the design?

54 Ans. When instructions were given for using the machine, they were to the effect that the wheel frame should be stationary at various points on the upright as circumstances required.

HENRY STICKNEY.

Henry Oxtoby deposes:

Henry Oxtoby, being duly sworn, deposes and says:

Ques. 1st. What is your name, age, residence, and occupation?

Ans. Henry Oxtoby; my age, 63 the 24th of November last; I reside in Harmony township, Clark county, Ohio; my occupation is that of a farmer.

Ques. 2nd. State if you own a combined reaper and mower, manufactured by defendants; if yea, state when you bought said machine; how long, and for what you have used it?

Ans. I do; I think I bought it in 1860 or 1861, and I have used it ever since for reaping and mowing.

Ques. 3rd. State in what respect, if at all, the mode of attaching the main wheel and tongue of your machine differs from that shown in the model A?

Ans. None at all.

Ques. 4th. Please state how you adjust your machine for reaping, and how for mowing?

Ans. This yoke is put down when we want to raise the cut of the machine, and we put the pin through; when we want to cut lower, we raise the yoke and put the pin through; we generally put the bolts throug the loop a little higher for reaping than for mowing.

Quest. 5th. Please state it ever the yoke is left free to move up and down when the machine is at work.

Ans. No, sir; never.

HENRY OXTOBY.

Sam'l Shuman deposes:

Samuel Shuman, being duly sworn, deposes and says:

Ques. 6th. State your name, age, residence, and occupation.

Ans. Samuel Shuman; age, 55 years; residence, Springfield,

55 Clark county, Ohio; occupation, a farmer.

Ques. State if you own a combined reaper and mower, manufactured by defendants; if yea, state when you bought said machine, and how long you have used it, and for what.

Ans. I do own one; I bought it in June, 1862; have used it ever since for both reaping and mowing.

Ques. 8th. State in what respect, if at all, the mode of attaching the main wheel and tongue to the main frame, in your machine, differs from that shown in model A.

Ans. None at all, except that mine has a guard or brace from the hinge bolt to the combination box.

Ques. Please state how you adjust your machine for reaping, and how for mowing?

Ans. For reaping, we lower the wheel frame, on the standard, by a pin passing through both the standard and wheel frame, which is always kept stationary when at work. As to the tongue, we move the bolts as circumstances require, both in reaping and mowing, but always leaving the tongue some play, less in reaping than in mowing; for mowing we use the pin passing through the standard in the upper holes; for close mowing in the top hole. The machine will not run when the wheel frame is left loose.

SAMUEL SHUMAN.

J. W. Haines deposes:

Jimeson W. Haines, being duly sworn, deposes as follows:

Ques. 1st. What is your name, age, residence, and occupation?

Ans. Simeson W. Haines; my age 24 years; my residence, Springfield, Clark county; my occupation that of a farmer.

Ques. 2nd. State if you own a combined reaper and mower, manufactured by defendants; if yea, state when you bought said
56 machine; and how long and for what you have used it?

Ans. I did; I think I bought it in 1860; have used it ever since for reaping and mowing.

Ques. 3rd. State in what respect, if at all, the mode of attaching the main wheel and tongue to the main frame, in your machine, differs from that shown in model A.

Ans. Just the same as the model.

Ques. 4th. Please state how you arrange your machine for reaping and mowing?

Ans. That depends altogether how the ground is; we raise or lower the frame according to the height of the cut; we put the pin in the standard and keep it stationary, and use a limber tongue.

Ques. 5th. Please state if the pin is ever taken out and the wheel frame left free, so that the main and main frame work independently of each other.

Ans. No, sir; we always use the pin in.

Cross-examined:

Ques. How do you cut in mowing?

Ans. That depends upon the smoothnes of the ground; you can cut as low as you wish to.

Ques. 7. Do you ever cut so low as to require the finger bar to rest upon the ground?

Ans. Yes, sir.

Ques. 8th. In what case should the driving wheel pass into a deep dead furrow, the finger bar resting the ground, what would prevent the driving wheel from being suspended above the surface?

Ans. I can't tell; never ran into a ditch so deep that the main driving wheel was suspended.

Ques. 9th. Upon what does the front end of the main frame res when the machine is in operation?

Ans. I do not know how to answer that.

Ques. 10th. Is the machine ever operated with a front or forward end of the main frame resting or sliding upon
57 the ground.

Ans. No, sir.

JIMESON W. HAINES.

E. Riegel recalled:

Emanuel Riegel recalled by defendant's:

Ques. 1st. Please state what, if any change is made, in the position of the driver's seat, to adapt the machine for mowing? and what is the effect of such change on the machine?

Ans. There is a change made from the front of the small frame piece on the right hand; can't state the precise distance, but far enough back to ballance the cutter bar to the ground and to give the tongue its play in the loop, so that to cross a dead furrow, to keep the front of main frame off the ground.

Cross-examined:

Ques. 2d. Upon what does the extreme front end of the main frame of defendant's machine rest when in operation?

Ans. Well, it don't rest on anything; the man in the driver's seat balances it back on the cutter bar in mowing.

Ques. 3d. How in reaping?

Ans. The bolts through the loop are placed closer together, so as to give the tongue very little play between the bolts.

Ques. 4th. Where is the raker's seat located on defendant's machine?

Ans. He does not sit, he stands on a boad back of the cutter bar.

EMANUEL RIEGEL.

Adjourned until to-morrow morning at 10 o'clock.

WEDNESDAY MORNING, *March 22d*, 1865.

The parties appeared, by their respective consel, as on yesterday.

Mr. Clough deposes:

William Clough presented, sworn, and examined on the part of defendants:

Ques. 1st. State your name, age, residence, and occupation.

Ans. My name is William Clough; my age is 45 years; my residence, Cincinnati; occupation, consulting engineer and patent solicitor.

Ques. 2d. State what facilities you have had for becoming
58 acquainted with the structure and operations of reaping and mowing machines and of the patents for inventions relating thereto?

Ans. I have been employed as attorney in many cases during the

last seven years, during which time I have examined many models and machines, and have also witnessed their operation in the field. I have prepared and prosecuted several applications for patents on reaping and mowing machines.

Defendant's counsel's paper evidence.

Defendant's counsel here offers in evidence the following papers, to wit:

A certified copy of the original letters patent for improvement in harvesting machines granted to Byron Dinsmore, February 10th, 1852, marked defendant's exhibit No. 1; a certified copy from the files of Patent Office, of the file wrapper and contents, in the matter of reissued letters patent granted D. M. Osborne and W. A. Kirby, assignees of Byron Dinsmore, January 28th, 1862, marked defendant's exhibit No. 2; a certified copy of the original letters patent granted Nelson Platt, June 12th, 1849, No. 6, 5, 17, marked defendant's exhibit No. 3; a certified copy of the letters patent granted Alfred Churchill, March 16th, 1841, No. 2,007, marked defendant's exhibit No. 4; a certified copy from ths files of the Patent Office of the specification and drawing in the matter of the rejected application of E. P. Cavett, rejected in 1852, marked defendant's exhibit No. 5.

Ques. 3d. Have you examined the specification of the reissued letters patent granted to complainants, contained in defendant's exhibit No. 2, and do you understand the invention therein de-
59 scribed and specified?

Ans. I have examined the specified copy of the patent referred to in the question, and think I understand the invention therein described and claimed therein.

Ques. 4th. State if you have examined the model marked A, and have read the testimony of the witnesses examined yesterday in relation thereto; if yea, state whether or not you understand the operation of the machine illustrated by said model.

(Counsel for complainant objects to part of this.)

(Counsel for complainants object to this question as irrelevant, so far as the same relates to the testimony of the witnesses examined yesterday.)

Ans. I have examined the model marked A; I heard the testimony of Riegel; I think I understand the nature and operation of the machine represented by the model.

Ques. 5th. State whether or not, in your opinion, the model A contains, either in principle or mode of operation substantially, the invention described and specified in the specification of the reissue granted to complainants January 28, 1862, and give your reason for any conclusion which you may express.

Ans. I do not regard the principle and operation of the defendant's machine as being the same as that claimed in complainant's patent, so far as relates to the matter of invention; I find plaintiffs' invention to consist in part in hanging the driving wheel in a supple-

mentary frame, or its equivalent, which is hinged at one end to the main frame, while its opposite end may be adjusted and secured at various heights, or be left free as desired. I find in the con-
60 struction of defendant's machine, it would be impracticable to operate the machine without securing the main frame in some fixed position, relatively to the ground or driving wheel; it is, therefore, not susceptable of being left free as is provided in complainant's patent. I refer in the foregoing to the device included in both machines, for controlling or releasing the main frame relatively to the driving wheel.

Ques. 6th. State if you find any mechanical differences in the location or construction or operation of the main and supplementary frames of the two machines referred to in the last question; if yea, point them out.

(Model, marked B, on the cutter bar, is mad an exhibit, and is to be taken as the correct representation of so much of the Dinsmore machine as is included in the first claim of invention in complainant's reissue.)

Ans. I find in complainant's machine, as represented in the model before me, the driving wheel, intermediate shaft, crank shaft, and gearing carried in a supplementary frame, hinged to the main frame, at the rear of the machine. In defendant's model, I find the driving wheel carried by a bow, jointed or hung to the forward part of the main frame, the intermediate shaft, crank shaft, and all the gearing, except the cogs, cast on the main wheel, are supported on the main frame, leaving the driving wheel with nothing but its own weight, of the aforesaid bow, to rest upon the ground and give adhesion to the driving wheel, this would be unsufficient to render the machine operative. To make the machine effective, it is ne-
61 cessary to depress the after part of said bow, and confine it to the standard at the rear, and attached to the main frame, so that the weight of the main frame, or a sufficient portion of its whole weight is imposed upon the driving wheel. In the construction of complainant's machine, provision is made for giving adhesion to the driving wheel by the weight of the machinery upon the supplementary frame, each to accommodate itself to the inequalities of the ground, independently of the other, as provided in complainant's patent. In reference to location, as propounded in the question, I find the supplementary frame, in complainant's model, is jointed or hinged rearward, or near the back of the machine; that it rotates around a centre having no reference to the connecting gearing, as the gearing is carried by the supplementary frame. When it is secured or fixed, it is held by bolts, or pins, in standards, at the forward part of the main frame, and rotates around the pinion shaft as a centre, by which construction the pinion is retained in gear in all positions with the cogs cast upon the driving wheel. The bow is used as a lever, the after-end of which, by being depressed, raises the main frame, throwing the weight thereof upon the driving wheel, and when raised to any required altitude, it is held in that position by a bolt, or pin, passing through the curved part of the bow, and

entering a standard which rises from the rear part of the main frame.

Ques. 7th. Look at the defendant's exhibit No. 3, 4, and 5, and state how far you find shown, and described, in specifications
62 and drawings therein contained, an apparatus for adjusting the height of the cutting apparatus, consisting of two frames hinged together, one of which carries the main driving wheel, or wheels, and the other of which supports the cutting apparatus.

Ans. I find in exhibit 3, the description and drawing of a harvester, in which a frame carrying the cutting apparatus is hinged or jointed to another frame, upon which the driving wheels are situated, and that the former is made to be raised and lowered for the purpose of adapting the cutters to cutting off the grain at different heights from the ground. Exhibit 4, is a description and drawing of another harvester in which there is a frame which carries the cutting apparatus, also a separate frame for the driving wheels, the former is adjustable relatively to the latter, being raised and lowered by levers, and retained by standards, the frame which carries the cutting apparatus, rotating around a fixed point, in the wheel frame. In exhibit five. I find a description and drawing of improvements in reaping machines, in which there is a permanent frame carrying the main running wheels; also, a rocking frame which carries the cutting apparatus, joined to the back of the permanent frame and supported in front by small running wheels, so that in traveling over any undulations in the surface of the ground, the frame which carries the cutting apparatus, is caused to raise and fall freely, and independently of the main driving wheels, according to the undulations in the ground.

Additional testimony to the 6th interrogatory.

The witness desires to add to his answer to the sixth interrogatory the following:

62 In reference to the mechanical construction of the two machines represented in the models A and B, there is a marked distinction in that which relates to the supplementary frame shown in model B, and the bow which carries the driving wheel in model A, as the two parts have different functions to perform; in the latter, the supplementary frame is an important part of the machine, and is, in fact, a frame, carrying the driving wheel and all the running gearing, while the bow in the model A, is in the nature of a bar, or lever, which has only one function, that of supporting and retaining the main frame of the machine at a suitable altitude relatively to the driving wheel.

Reissued letters patent in evidence.

The counsel for the defendants offers in evidence reissued letters patent, Nos. 985 and 986, granted to William N. Whiteley, assignee of Thomas S. Steadman, marked defendants' exhibit No. 6 and 7.

Ques. 8th. Please to look at the defendants' exhibits Nos. 6 and 7, and state how far the supplementary frame or yoke in model A, is

constructed in accordance with the inventions set forth in the exhibits.

Ans. The mechanical construction of the yoke in model A, is unlike the supplementary arm or frame in the machine referred to in the question, though the functions of the two devices are to a certain extent the same.

Cross-examined:

Ques. 9th. Have you ever seen one of the defendants' machines?

Ans. Not that I distinctly remember.

Ques. 10th. Then have you any practical knowledge so as
64 to be able to speak from your own observation of the working of the defendants' machine; whether it would or would not be practical to operate it without securing the main frame in some fixed position relative to the ground or driving wheel.

Ans. I have no practical knowledge of the working of defendants' machine, nor do I need any to enable me to determine that the weight of the driving wheel would be sufficient of itself to give adhesion and render the machine operative.

Ques. 11. Have you any knowledge or information with regard to the weight of the driving wheel used by the defendants in their machine? and if so, state the weight thereof.

Ans. Ans. I have no knowledge of the weight except that which I derive from the relative size and appearance of the driving wheel in the model said to be a representation of defendants' machine.

Ques. 12th. From your knowledge thus derived, what should you judge to be the weight thereof?

Ans. From three to five hundred pounds.

Ques. 13th. Have you ever seen a full sized machine which is represented in part by model A.

Ans. I think not.

Ques. 13. Have you any knowledge or information with regard to the weight of the driving wheel used by complainants in their machine represented by model B; and if so, state the weight thereof.

Ans. I have no knowledge, except that which I derive from the relative size and appearance of the driving wheel in the model said to be a representation of complainants' machine.

Ques. 14th. Have you assumed in your answers to the direct interrogatory, that the weight of the driving wheel of each ma-
65 chine was the same?

Ans. I have assumed that in both machines the driving wheels are made with reference to strength and not weight, as a distinctive purpose in construction.

Ques. 15th. Have you assumed in your answers to the direct interrogatory that the weight of the driving wheel in each machine was the same?

Ans. I assume that in machines of the same capacity the weight of the driving wheels respectively would not differ materially.

Ques. 16th. Can you form any judgment, derived from facts known to you, in regard to the weight of the intermediate shaft, crank shaft

and gearing carried by the supplementary frame in complainants' machine; and if so, state the weight thereof according to your best judgment.

Ans. I do not know the sizes of the gearing, shafting, and timbers used in complainants' machine, hence cannot give perhaps an approximate weight of the parts.

Ques. 17th. In your additional answer to the 6th interrogatory you say "while the bow in the model A, is in the nature of a bar or lever, which has only one function, that of supporting the main frame of the machine at a suitable attitude relatively to the driving wheel," please state what holds the driving wheel in its upright position.

Ans. Its connexions with the bow or lever.

Ques 18th. What do you understand by the term frame in mechanics?

Ans. Two or more parts united together having a distinct function or functions.

Ques. Then the term can never be applied to a single piece, whatever may be its form or function.

Ans. It is not common to apply the term frame to a single piece.

66 Ques. 20th. Were you examined as a witness in case of Wm. N. Whiteley against William Swayne, then depending in this court.

Ans. I believe so.

Ques. 21st. Was the same exhibit shown to you upon your examination in that case, and which has been here shown to you upon this examination and which is marked in this case defendants' exhibit No. 6.

Ans. The same I believe.

Ques. Did you not then testify that the piece marked I, in the drawing was "a frame"?

Ans. I do not remember distinctly, if it was called a frame in the examination or in the patent, I probably conformed to the phraseology then used.

Ques. 23d. Do you intend now to be understood that the term or phraseology thus used was improper?

Ans. I mean to say, that it is not customary to call an arm or plate, or lever, a frame, though a frame may perform the functions of an arm or lever.

Ques. 24th. Does what you term the bow in defendants' machine perform the same functions in supporting the driving wheel in that machine, as does the frame in model B, in supporting the driving wheel in that machine.

Ans. As far as simply supporting the wheels in the two machines is concerned the two parts referred to in the question perform the same function.

Ques. 25th. Is the cutting apparatus in defendants' machine supported by a different frame?

Ans. It is supported by the main frame of the machine and not by the bow.

Ques. 26th. Assuming the defendants' machine in operation with the pin removed from the standard, would the driving wheel and cutting apparatus each follow *each follow* the inequalities of the
67 ground independently of the other.

Ans. The main frame would be dragged over the surface of the ground, the driving wheel would freely follow the inequalities in its track.

Ques. 27th. Do you consider that an honest and frank answer to the question?

Ans. I do. The main frame would also follow inequalities of large enough in area to accommodate the entire length and breadth of the machine or any part thereof, which might be separately affected by obstructions or depressions in the ground.

Ques. 28th. Do you consider, when I used the term "cutting apparatus" in my question, that I meant "the main frame."

Ans. I suppose you meant all that would rest on the ground.

Ques. 29th. Then please answer my question in regard to the cutting apparatus following the inequalities of the ground independently of the driving wheel.

Ans. The cutter bar, being rigidly secured to the main frame would be controlled by it and participate in all its motions.

Ques. 30th. Is the cutter bar in that model represented as being fastened on the under side of the main frame.

Ans. The inner end of the cutter bar is bolted to a shoe, and a short bar extends from the shoe along under the rear end of the main frame, and is bolted thereto.

Ques. 31st. Is the cutter bar lower than any part of the main frame? and if so, how much lower, judging from the model before you? and is the cutter bar straight?

Ans. In a perfectly horizontal position of the cutter bar it is perhaps twice its thickness lower than the lower face of the main frame, but if the frame was allowed to rest freely upon the ground,
68 I think the weight of the frame would cause the outer end of the cutter bar to be raised, allowing the frame to rest on the ground, the shoe at the inner end of the cutter bar acting as a fulcrum; the cutter bar is strait.

WM. CLOUGH.

The complainants here produce and offer in evidence a certified copy from the files of the Patent Office, of the cavat filed by Byron Dinsmore, June 23d, 1848, which is marked complainants' exhibit No. 1.

JOHN McLEAN, *Examiner.*

Examiner's certificate.

UNITED STATES OF AMERICA,
Southern district of Ohio.

I, John McLean, examiner, duly appointed by the circuit of the United States within and for the 7th circuit and southern district of Ohio, under the 67th rule in chancery, certify that on the 21st

day of March, 1865, I was attended by Samuel S. Fisher, solicitor for defendants, and by David Wright, solicitor for complainants, at the clerk's office of said court in Cincinnati, Ohio, and by the following witnesses on behalf of defendants: Emanuel Riegel, Henry Stickney, Henry Oxtoby, Samuel Shuman, Jimeson W. Haines and William Clough; that said witnesses were of sound mind and lawful age; and were by me first carefully examined, cautioned, *cautioned* and sworn to testify the whole truth; and their several depositions were by me reduced to writing in presence of the respective counsel and witnesses; and after the same were carefully read the witnesses respectively subscribed the same in my presence. I have retained said depositions in my possession for the purpose of sealing
69 and directing with my own hand to the court for which the same was taken. And I do further certify, that I am not of counsel, nor attorney for either of the parties in depositions and caption named, nor in any way interested in the event of the cause named in said caption.

In testimony whereof, I have hereunto set my hand and seal this 21st day of March, in the year one thousand eight hundred and sixty-five.

[SEAL.] JOHN McLEAN, *Examiner.*

Defendants' depositions taken before John C. Miller, special examiner.

Depositions of Isaac Shank, Isaac N. Kyle, C. D. Miller, J. T. Warder, H. G. Miller, John D. Clark, (William Tomlin,) James Foley, John Marsh, William O. Downs, Amos Whiteley, J. L. Taylor, Washington Ward and Sol. J. Houck; taken before John C. Miller, special examiner, in evidence in this cause, on behalf of the defendants, in the words and figures following, to wit:

Notice to Plaintiffs.

United States circuit court, southern district of Ohio.

WILLIAM A. KIRBY and D. M. OSBORNE
vs.
WILLIAM N. WHITELEY, JEROME FASSLER, and Oliver S. Kelly. } No. 80.

The plaintiffs will take notice that defendants by their counsel, will take the depositions of sundry witnesses under and in accordance with the 67th amended rule in equity, before John C. Miller, a special examiner in this cause, at his office in Springfield, Clarke county, Ohio, commencing on Monday, the 11th day of June, at 11 o'clock, A. M., and will continue the taking of said depositions from day to day until the same are completed.

SAMUEL S. FISHER,
Defendants' Solicitor.
MASON & BOWMAN,
Comp. Solicitors.

Received copy.

70 United States circuit court, southern district of Ohio.

WILLIAM A. KIRBY and D. M. OSBORNE
vs.
WILLIAM M. WHITELEY, JOSEPH FASSLER, and Oliver S. Kelly.

Depositions of sundry witnesses taken before me, John C. Miller, duly appointed a special examiner in the above-entitled cause, and taken pursuant to and at the time and place specified in the annexed notice, and for and in behalf of the defendants, the witnesses having been first severally sworn and affirmed by me as hereinafter certified. There were present, David Wright, as attorney for the plaintiff, who objected, previous to examine any witness, to the introduction of any cumulative testimony, which objection is now here preserved. Present also, the defendant, William N. Whiteley, and his attorney James Moore.

Isaac Shank deposes:

Isaac Shank, being by me, first duly sworn according to law, as hereinafter certified, in answer to interrogatories, deposes and says:

Question 1st. State your name, age, residence, and occupation.

Answer. My name is Isaac Shank; age 60 years; residence near Enon, Clarke county, Ohio; occupation is that of a farmer.

Question 2. Have you in your possession, or do you own a combined reaper and mower, made by Whiteley, Fassler & Kelly, of Springfield, Ohio?

Answer. I own a half of one.

Question. 3. State whether you ever used that machine yourself in the field?

Answer. I have used it both for reaping and mowing.

Question 4. In what manner do you arrange the yoke and standard for mowing; whether rigid or loose?

Answer. Rigid.

71 Question. 5. Have you ever seen your machine used for mowing, with the yoke loose—that is, without the pin being put through the standard? If so, describe how the machine worked when so arranged.

Answer. I have tried it that way, but it requires very level ground, done poor work, and we had to follow after and throw the cut grass out of the way of the next swath.

Question 6. Where does the weight of the hinder part of the machine rest when the pin is thus withdrawn?

Answer. The right-hand corner of the frame drags upon the ground.

Question 7. What do you mean by the right-hand corner? Do you mean the hinder part of the frame?

Answer. Yes.

Question 8. When the machine is thus arranged, with the tongue free to play, where does the forward part of the frame of the machine rest?

Answer. I did not take particular notice whether the weight was on one corner or on the whole frame.

Question 9. Do you use the tongue of your machine for mowing, loose or rigid?

Answer. Loose.

Question 10. What angle does the cutter bar present when the machine is arranged in the manner described, whether the machine is in motion or standing still?

Answer. To the best of my judgment, the end of the cutter which rests on the small wheel, is from 3 to 6 inches from the ground; when the end nearest to the machine rests upon the ground, the end that has the small wheel is from 3 to 6 inches from the ground.

ISAAC SHANK.

I. N. Kyle deposes.

Isaac N. Kyle, also being by me first duly sworn, as by me hereinafter specified, in answer to interrogatories, deposes as follows:

72 Question 1. What is your age, residence, and occupation?

Answer. Age, 33; residence, Elizabeth township, Miami county, Ohio; occupation, a farmer.

Question 2. What opportunities, if any, have you had for judging of the manner of using the combined reaper and mower made by defendants in this case?

Answer. I have been acting as one of their agents in Miami county since 1858; have sold, set up, and operated more or less of their machines since '58.

Question 3. Have you generally instructed persons to whom you, as agent of defendants, sold machines, as to the manner in which the machine ought to be used as regards the rigidity or looseness of the tongue of the machine when used as a mower?

Answer. I have generally done so. My instructions have been to use the machine as a mower, with a limber tongue.

Question 4. Have you a practical familiarity with the use of the machine as a mower?

Answer. I should think so, at least. I don't know that I would be an expert in the use of one.

Question 5. Have you ever used said machine as a mower, with the pin drawn wholly from the standard?

Answer. In one or two instances I have forgotten to put in the pin when starting up as a mower. The effect was that the machine clogged up; the guards on the cutter bar would run into the uneven surface of the ground. If the surface was even, it would perhaps run a few rods.

73 Question. 6. Where did the weight of the main frame of the machine rest when the pin was thus withdrawn?

Answer. Upon the ground.

Question 7. Look at the drawing now shown you, and marked "defendants' exhibit K," (here follows diagram marked page 73.)

and state whether or not said exhibit represents one of said machines when the pin is thus withdrawn, and the yoke left free?

Answer. It does.

ISAAC KYLE.

C. D. Miller deposes:

Also, Charles D. Miller, being first duly sworn, as hereinafter certified, in answer to interrogatories, deposes as follows:

Question 1. What is your age, residence, and occupation?

Answer. Age is 47 years; residence, Mad River township, Clarke county, Ohio; occupation, a farmer.

Question 2. Do you own a combined reaper and mower, made by defendants?

Answer. I own the one half of the machine testified to by Shank; have used it every year for 5 or 6 years.

Question 3. How are the standard and yoke in said machine generally arranged, as regards each other, when used as a mower?

Answer. I use the tongue loose; I sometimes use the pin above the yoke, and sometimes through the yoke.

Question 4. Have you ever used your machine with the pin withdrawn from the standard, so that the yoke played loose?

Answer. No, I never tried it in that way; I never made any mistakes.

Question 5. In your answer to question No. 3, you say you sometimes use the pin through the standard above the yoke, and sometimes through the yoke and standard. Does it make any difference, as regards the uniform movement of the cutter bar along the ground, whether the machine be arranged in either of these ways when used for mowing?

74

Answer. It won't make any *make any* difference, only a little change in the height of the cut.

Question 6. When you say it makes a little change in the height of the cut, do you mean to say that when the yoke is fastened at any given point upon the standard, that the cut will be either higher or lower by the pin being through the yoke or above the yoke?

Answer. Yes; it makes a difference in the height of the cut. For instance, if you put the pin through the standard and the yoke, and then take it out and put it through the standard above, it makes a change in the cut; but I don't now remember whether it makes it higher or lower.

Question 7. When you say that that difference of arrangement causes that difference of cut, is it or is it not meant that the cut cannot be the same in both cases because of the position of the holes in the standard; the yoke cannot be made to occupy the same position with the pin through the yoke, as it would with the pin above the yoke?

Answer. Tholes in the standard are to change the height of the cut. When you put the pin through the standard alone, it gives the difference of about half the distance between the two holes, which you can't get with that standard in that machine in any other way.

Question 8. Were you present this morning, just outside of this city, where a combined mowing and reaping machine was tried as a mower? If so, state whether that was the same kind of ma-
75 chine as the machine of which you have been testifying?

Answer. I was, and it was.

Question 9. State whether, in your presence, said machine was tried as a mower with the pin withdrawn from the yoke and standard? And if so, state how it worked when so arranged—whether beneficially or not.

Answer. It didn't do good work. It dragged on the ground so that it couldn't do good work.

Cross-examined:

Question 1. About how much grass have you cut with your machine during the last six years?

Answer. I have cut about ten acres a year.

Question 2. What proportion of that was cut, with the pin through the standard above the yoke?

Answer. Probably one-third of it was cut with the pin above the yoke; I always used a limber tongue.

Question 3. In the experiment this morning, was the machine used with a limber tongue?

Answer. It was tried both ways. When the pin is taken out entirely it lets the machine down, and the tongue can't play free; it makes a stiff tongue.

C. D. MILLER.

J. T. Warder deposes:

Also, James T. Warder, being by me first duly affirmed, as hereinafter certified, in answer to interrogatories, deposes as follows:

Question 1. What is your age, residence, and occupation?

Answer. Age, 42 years; residence, Springfield township, Clarke county, Ohio; occupation, a farmer.

Question 2. What acquaintance have you, and what opportunities, if any, have you had for knowing of, Dinsmore' harvesting machine?

(Objected to as wholly immaterial. Answer insisted on and taken, subject to objection.)

Answer. I used a Dinsmore two harvests—the harvests of 1852 and 1853—the year of the reaper trial at Springfield, and the succeeding year.

Question 3. State, if you know, who built that Dinsmore harvester.

76 Answer. Warder & Brokaw. I was interested in the manufacture and in the firm.

Question 4. State whether that firm, or any other, as far as you know, make the Dinsmore machine at the present time?

(Same objection as to third interrogatory. Answer insisted on and taken, subject to objection.)

Answer. I am not aware of their being manufactured at the present time, being entirely out of reaper trade.

Question 5. How long is it since the firm of Warder & Brokaw ceased manufacturing the Dinsmore machine?

Answer. I am not able to answer. It was either 2 or 3 years after 1852, until all were sold that were manufactured.

Question 6. Was that machine a reaper or mower, or combined reaper and mower?

Answer. We called it a reaper; claimed for it a self-raking reaper.

Question 7. As far as you know, is or was the Dinsmore harvester capable of being used as a mower?

(Same objection as to third interrogatory. Answer insisted on, subject to objection.)

Answer. As a self-raking reaper, as we made it, with the self-raking attachment and platform, it could not be used as a mower. The Dinsmore machine, as it was made by Warder & Brokaw, was capable of mowing without the platform and raking attachments.

Question 8. Did the firm of Warder & Brokaw ever make a Dinsmore machine adapted to mowing?

Answer. There was one machine altered to cut flax low, but it had a platform. We made none strictly as a mower in my recollection.

Question 9. Did that firm cease manufacturing reapers when they ceased manufacturing the Dinsmore reaper; or did they manufacture harvesting machines of a different kind afterwards? And if so, what was their reason for ceasing the manufacture of the Dinsmore harvester, and commencing to make a harvester of another type?

77

(Objected to. Same objection as to third interrogatory. Answer insisted on, subject to objection.)

Answer. Warder & Brokaw, or the firm succeeding them, continued the manufacture of harvesting machines of other kinds, because there was more profit in other machines. We made the Dinsmore by license, under him.

J. T. WARDER.

Also, Horatio G. Miller, being by me first duly sworn, as hereinafter certified, in answer to interrogatories, deposes as follows:

Question 1. What is your age, residence, and occupation?

Answer. Age is 47 years; near Enon, Clarke county, Ohio; occupation a farmer.

Question 2. Have you a harvesting machine in your possession, made by defendants? and if so, how long you had said machine?

Answer. Yes. About five years.

Question 3. In what position is the yoke of the said machine fixed, as regards the standard, when you use it as a mower?

Answer. Generally with the pin above the yoke, and possibly it might have been all the time when I used it myself.

Question 4. Have you ever used said machine, or attempted to use it, with the pin withdrawn from the standard? and if so, how did the machine work when so arranged?

Answer. I never attempted to use it so in my recollection.

Question 5. When used as a mower, is the tongue loose or rigid in your machine?

Answer. Loose.

Question 6. Were you present this morning, outside of this
78 city, when a trial was made of one of the defendants' machines? and if so, state the different manners in which the machine was used as a mower as regards the tongue, and yoke, and standard?

Answer. I was. In the first place it was put up as I generally fix my machine for mowing, with the pin through the standard above the yoke. The tongue was loose, and then the pin was withdrawn, and the tongue was made rigid; and then the tongue was made loose, the pin being withdrawn. I believe that was all.

Question 7. *Question* 7. Look at drawing now shown you, marked "Defendants' exhibit K," and state whether that is a fair representation of the machine as you saw it this morning tried, when the pin was withdrawn and the tongue rigid.

Answer. It is a fair representation, except the tongue, as shown in the drawing. I cannot tell whether it is intended to be rigid or not. I think from the drawing it is; and if it is, it is a fair representation throughout. When the pin was withdrawn from the standard, and the tongue made rigid, the hind end rested heavily on the ground.

Question 8. When the pin was thus withdrawn and the tongue loose, how was the main frame of the machine supported?

Answer. It lay upon the ground; but I don't remember whether it was the frame or cutter-bar. I think the entire length of the frame was on the ground when the tongue was loose.

Question 9. How did the machine mow when the pin was thus out, with the tongue either rigid or loose?

Answer. Very badly. I wouldn't regard it a practical mower in either case, with the tongue either rigid or loose, with the pin out.

79 Question 10. Did you ever use your said harvesting machine as a reaper, with the pin through the standard and above the yoke?

Answer. I think not.

Question 11. Was there in the machine used this morning, when the pin was through the standard and above the yoke, any vibrations in the yoke, caused by the machine running over irregular ground?

Answer. Not any.

Question 12. From the experiments made this morning, and your previous knowledge of the machine, is it your opinion that there is any difference in the amount or manner of the variance of the cutting apparatus to or from irregular ground by placing the pin either through the yoke and standard, or through the standard only, above the yoke?

Answer. Well, in ordinary ground there is no difference.

Question 13. Would it make any difference as regards cutting apparatus following the undulations of the ground, if the ground was rough and the machine arranged as described in the last question?

Question 5. When used as a mower, is the tongue loose or rigid in your machine?

Answer. Loose.

Question 6. Were you present this morning, outside of this
78 city, when a trial was made of one of the defendants' machines? and if so, state the different manners in which the machine was used as a mower as regards the tongue, and yoke, and standard?

Answer. I was. In the first place it was put up as I generally fix my machine for mowing, with the pin through the standard above the yoke. The tongue was loose, and then the pin was withdrawn, and the tongue was made rigid; and then the tongue was made loose, the pin being withdrawn. I believe that was all.

Question 7. *Question* 7. Look at drawing now shown you, marked "Defendants' exhibit K," and state whether that is a fair representation of the machine as you saw it this morning tried, when the pin was withdrawn and the tongue rigid.

Answer. It is a fair representation, except the tongue, as shown in the drawing. I cannot tell whether it is intended to be rigid or not. I think from the drawing it is; and if it is, it is a fair representation throughout. When the pin was withdrawn from the standard, and the tongue made rigid, the hind end rested heavily on the ground.

Question 8. When the pin was thus withdrawn and the tongue loose, how was the main frame of the machine supported?

Answer. It lay upon the ground; but I don't remember whether it was the frame or cutter-bar. I think the entire length of the frame was on the ground when the tongue was loose.

Question 9. How did the machine mow when the pin was thus out, with the tongue either rigid or loose?

Answer. Very badly. I wouldn't regard it a practical mower in either case, with the tongue either rigid or loose, with the pin out.

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Answer. I think not.

Question 11. Was there in the machine used this morning, when the pin was through the standard and above the yoke, any vibrations in the yoke, caused by the machine running over irregular ground?

Answer. Not any.

Question 12. From the experiments made this morning, and your previous knowledge of the machine, is it your opinion that there is any difference in the amount or manner of the variance of the cutting apparatus to or from irregular ground by placing the pin either through the yoke and standard, or through the standard only, above the yoke?

Answer. Well, in ordinary ground there is no difference.

Question 13. Would it make any difference as regards cutting apparatus following the undulations of the ground, if the ground was rough and the machine arranged as described in the last question?

Answer. I think it would. If the pin was put through the yoke, and the ground wheel would pass over a deep hole in the ground, it would raise the outer end of the cutter bar higher than in case the pin was above the yoke. In the latter case the yoke would slip down on the standard, and let the wheel into the hole without raising the cutter bar at the outer end quite so high as if the pin was through the yoke.

Question 14. How much of an increase or depression in the ground would it require to make the yoke vibrate down from the pin on the standard?

Answer. We run over the roughest ground we could find this morning, which we, as farmers, considered too rough for a meadow, and there was no vibrations of the yoke that I could see;
80 but there was a chunk laying in front of the machine—I think it was about 7 inches in height—that the ground wheel passed over, and the hind end of the frame fell on to this chunk, and held the frame up, so that the yoke slipped down on the standard; and, as soon as the frame passed off of the chunk, the yoke slipped up on standard to the pin.

Question 15. Then, if I understand you aright, as far as your experience is concerned, both in the experiment made thus morning in the ground you described as being too rough for meadow, and in your previous experience of defendants' machine you have never seen the yoke vibrate when the machine was used as a mower in any kind of ground, or am I right?

Answer. I did'nt see it this morning. I have, when I used it myself on extremely rough ground—in ground where the front end of the frame would rest on one side of a hollow, and the hinder end of the frame rested on the other side of the hollow, or in passing from high ground into a deep hollow, where the hind end of the frame would rest on the ground, and the tongue on the horse's neck.

Question 16. When this vibration, which you describe, occurs, would it be possible, during the instant that the yoke has fallen from the pin and before it rises again, for the cutting apparatus to continue cutting?

Answer. It would in ordinary grass.

Cross-examination:

Question 1. I understood you to say that you generally, possibly always, when you used your machine yourself as a mower, used it with the pin above the yoke. Did you prefer to use it as thus arranged rather than with the pin through the yoke? and if so, give your reasons for such preference.

81 Answer. I did. In the first place I generally got the height of the cut to suit me better. In the second place, if grass should collect under the cutter bar, it would be easier to raise the frame and take it out, because I did'nt have to change the pin; thirdly, because I have some extremely rough ground in my meadow.

Question 2. How much grass was mown this morning in the experiment you speak of?

Answer. I could'nt state the quantity of ground; but we were, perhaps, two hours at work.

Question 3. Was the work well done when the machine was used with the pin above the yoke?

Answer. The machine was set rather too high to do good work in that kind of grass. The grass was very short; that was all the fault I had to find with it. Where the grass was high enough it seemed to work very well.

Question 4. In what hole in the standard was the pin inserted?

Answer. In the second hole from the top. In my own machine I raised the pin according to the unevenness of the ground and the length of the grass.

Reexamination:

Question 1. Please state if, in your experience, you have known of any of defendants' machine having been so arrainged as that, in passing over what might be called rough meadow ground, the yoke would vibrate with the unevenness of the ground.

Answer. I have not.

H. G. MILLER.

J. D. Clark deposes:

Also, John D. Clark, being by me first duly sworn according to law, deposes and says, in answer to interrogatories, as follows:

Question 1. What is your age, residence, and occupation?

Answer. Age, 60 years; residence, Moorefield township, Clarke county, Ohio; occupation, a farmer.

82 Question 2 Were you present at the farm of Mr. James Foley, in this county, on last Friday, during the experiment there made with a machine of his made by defendants in this case? and if so, state how it was used, with reference to the yoke and standard, and with what effect.

Answer. I was there. They first took out the standard pin and started the horses, and the machine would'nt mow. It run up over the grass; the frame fell, and threw the cutter bar up; then they put the pin in the second or third hole from the top of the standard. I'm not certain whether we put it through the yoke or not. It mowed very nice then. We went down, then, on a very rough piece of ground. The pin was above the yoke when we went down there. It moved over the rough ground without vibrating up and down. Then, when we turned around to go back over the rough ground, one of the parties threw a rail under the shoe of the machine, and the wheel and all went over it; and I was noticing particularly for vibration, and I did not see it move any going over that rail. The operation was repeated once or twice, but I did not see any difference in the effect; and then afterward we fixed the machine in the way Mr. Foley always mowed. He fixed it himself, with the pin through the second

hole above the yoke; and then they mowed over some one or two hundred yards, and it mowed very nice. The tongue was then loose. I could see no vibration of the yoke however. I am not certain that the pin in the last experiment was above the yoke; it appears to me now that it was through the yoke.

JOHN D. CLARK.

J. Foley deposes:

Also, James Foley, being by me first duly sworn, as by me herein certified, in answer to interrogatories, deposed as follows:

83 Question 1. What is your name, age, residence, and occupation, and were you examined in this case before?

Answer. My name is James Foley; age, 27; past occupation, a farmer; I have been examined in this case before.

Question 2. Was there or not an experiment carried on, on your farm last Friday with your machine, (the same machine that was testified to by you heretofore in this cause;) and if so, were you present at such experiment?

Answer. Yes; there was such an experiment, and I was there.

Question 3. Was the machine used on that occasion with the pin above the yoke through the standard?

Answer. Yes, sir.

Question 4. Was the ground upon which you then experimented as rough as it was in Hodge's farm in the experiment to which you testified heretofore in this cause, or was it more or less rough?

Answer. There was part of the ground about the same as that on Hodge's farm, and then we moved down to a rougher piece of ground than Mr. Hodge had.

Question 5. Did you observe, while the machine was passing over that rough ground, whether or not the yoke vibrated? and if so, state whether it did vibrate or not.

Answer. I was watching that thing very particularly; and, as far as I could see, I could not see that the yoke vibrated at all. The tongue was loose, and there was a vibration in front. We also had the tongue rigid in front. I could see no vibration in the yoke when the tongue was rigid.

Question 6. Did you, on that occasion, use your machine with the pin through the yoke and standard? and if so, what kind of
84 ground, rough or smooth, did you run over, and what was the difference in the operation of the machine with these different arrangements?

Answer. Yes; we used the pin through the yoke and standard. That is the way I have always used the mower, and never saw it used any other way until these experiments. It always cuts mighty well in the position I always used it. It cuts very well with the pin above the yoke; but I don't see that there is any great advantage in it, and don't see it yet, unless you should meet with an obstruction that would run under the fore part and strike the back part of the frame. In that case *in that case* the frame would rise up and go over

the obstruction; that is the only advantage I could see in having the pin above the yoke.

Question 7. Suppose the pin was fastened through the yoke and standard, and the machine would meet with an obstruction similar to that described in your last answer, the tongue remaining loose, how would the machine then operate?

Answer. The back part of the machine would raise and go right over the obstruction. When the obstruction would strike the front part of the machine the tongue would vibrate, and the front part of the machine would go over the obstruction; and when the obstruction passed the centre the back part of the machine would rise.

Question 8. Then the result of the operation of the machine, as arranged in the manners described in the two preceding answers, would be the same, would it not?

Answer. I don't see how it could be any other way very well.

JAMES FOLEY.

W. Tomlin deposes:

Also, William Tomlin, being by me first duly sworn, as
85 hereinafter certified, in answer to interrogatories, deposed as follows:

Question 1. What is your age, residence, and occupation?

Answer. Age, 42 years; I live in Jackson township, Champaign county, Ohio; occupation, a farmer.

Question 2. Have you, or had you in your possession one of the combined reapers and mowers, made by the defendants in this cause?

Answer. I have. I have used one three seasons, '63, '64, and '65.

Question 3. Have you ever used said machine for reaping with the pin above the yoke in the standard? and if so, how did it operate when so arranged?

Answer. I have used it so, and I could see no difference being that way and through the yoke. I have put the pin above the yoke in cutting wheat, simply because it was easier to get the pin out.

Question 4. How did you use the tongue, loose or rigid, when the machine was used as a mower?

Answer. I used it loose. In mowing I have used the machine with the pin through the yoke and the pin above the yoke, both. I usually use it with the pin above the yoke, because if the grass gets under the cutters, it is easier to raise the machine to get it out. As far as I have observed, the machine works as well when the pin is through the yoke as when it is above the yoke.

WM. TOMLIN.

J. Marsh deposes:

Also, John Marsh, being by me first duly sworn, as hereinafter certified, in answer to interrogatories, deposes as follows:

Question 1. What is your age, residence, and occupation?

Answer. Age, 29 years; residence, Moorefield township, Clarke county, Ohio; occupation, a farmer.

Question 2. Have you in your possession one of the combined reapers and mowers, made by the defendants in this case?

Answer. I have.

Question 3. In your use of said machine, as a mower, how do
86 you arrange the tongue, whether loose or rigid, and how do you fasten the yoke and standard?

Answer. I use the tongue loose, and the pin through the yoke and standard.

Question 4. Why do you not place the pin above the yoke through the standard?

Answer. Well, I never thought it was necessary. I never experimented on it any. It worked well enough the way it was for me.

JOHN MARSH.

W. O. Downs deposes:

Also, William O. Downs, being by me first duly sworn, as by me hereinafter certified, deposed as follows:

Question 1. What is your age, residence, and occupation?

Answer. Age, 35 years; residence, West Liberty, Logan county, Ohio; occupation is that of selling machines of all kinds, among others, the defendants' machine.

Question 2. State what, if any, instructions you have usually given in accordance with the instructions you received from defendants in this case, to purchasers of defendants' combined reaper and mower, as to their use of said machine as regards the rigidity or looseness of the tongue, and also as regards the mode in which the yoke should be fastened, if fastened at all.

Answer. I instruct them to mow with a limber tongue, and to run the pin through the yoke and through the standard; that is the usual instruction.

Question 3. Do you ever instruct purchasers of machines to arrange the machine in any different manner for mowing?

Answer. I do not.

Question 4. What experience, if any, have you had in the practical working of said machine as a mower?

Answer. I have seen it experimented on with the wheel left free, by taking out the pin. The effect was that the rear side of the main
87 frame of the machine ploughed upon the ground, and the outer end of the cutter bar rode up off the ground, I suppose about 6 or 7 inches. The tongue was made rigid and then loose. The front part of the main frame was supported by the pin above and by the horses' necks when the tongue was rigid. When the tongue was loose, the whole frame rested upon the ground. In making the tongue rigid, it holds the cutter bar to its place. It don't adjust itself to the unevenness of the ground with the tongue made loose, if the pin is out of both yoke and standard. All the references in this answer are made with reference to the machine when the pin was out of both yoke and standard.

Question 5. How does the machine operate when thus arranged?

Answer. It don't operate at all.

Cross-examination:

Question 1. You say you have seen the machine experimented on; please state when and where, and who drove, and whether the driver rode on the machine or walked.

Answer. Yesterday, about a mile from the city; I don't know the driver; the driver rode.

Question 2. Were those experiments all made with the pin taken out of both standard and yoke?

Answer. Tey wasn't all—some of them that way, and some with the pin in through the yoke, and some with the pin in above the yoke.

Question 3. How did the machine operate when the pin was placed through the standard and above the yoke?

Answer. It worked well, and I didn't see any difference, whether it was through the yoke or above the yoke.

Question 4. If there is no difference in the working of the machine as a mower, whether the pin is put through or put above the yoke, why do you instruct purchasers always to use the machine as a mower with the pin through the yoke and not above the yoke?

Answer. Because such wer my instructions from the mak-
88 ers.

Question 5. You say you sell machines of all kinds; do you sell any combined reapers and mowers except those *those* manufactured by the defendants? and if so, state what other combined machines, and where they are made.

Answer. The excelsior, made in Hamilton Ohio; no other combined machine.

All of the re-examinations and recross-examinations stricken out by the consent of both parties.

WILLIAM O. DOWNS.

A. Whiteley deposes:

Also, Amos Whiteley, being by me first duly sworn, as hereinafter certified, deposed and says:

Question 1. What is your age, residence, and occupation?

Answer. Age, 28 years; residence, Springfield, Ohio; occupation, general agent for defendants.

Question 2. State what opportunities you have had for seeing the practical operation of the combined reaper and mower of defendants?

Answer. I have been engaged in the sale of those machines, setting them up, and operating them for purchasers and in field trials, for the past eight years, having operated the machines myself under all circumstances.

Question 3. Describe the different modes of arrangement in which you have operated said machine, as regards the use of the machine as a mower, with reference to the tongue being loose or rigid, and also with reference to the yoke being left free and as to its being fastened by the pin above the yoke and through the yoke.

Answer. I use the machine with the tongue limber or flexible in all cases in operating the machine as a mower. I have attempted to use the machine with the tongue stiff or rigid, but found it impractible. I used the machine in mowing with the pin through the standard and yoke. I have used the machine with the pin through the standard above the yoke, but found no practical difference in
89 working of the machine, and prefer using it with the pin through the yoke and standard, as it is intended to be used; holes being made through the yoke for that purpose. I have attempted to use the machine in mowing with the yoke free at the rear end, but I failed to make the machine work as I was unable to keep the cutter bar on the ground, and found that there was not sufficient power in the machine to propel the knives to cut grass with the machine in this position.

Question 4. State whether or not you have a knowledge of the different types of combined reapers and mowers, and of their different peculiarities built throughout the country?

Answer. I believe I have a knowledge of nearly all the different combined reapers and mowers now manufactured in the United States, and have examined most of them thoroughly, and am acquainted with their different peculiarities in construction and operation.

Question 5. State whether you know of any combined reaper and mower that in its operations as a mower, the driving wheel being left free, the cutting apparatus will follow the undulations of the ground.

(Objected to. Objected to by the counsel for the plaintiff as new matter, and not rebutting testimony, and is immaterial, and he now gives notice that he will move for the supression of the answer thereto if insisted upon, upon the hearing. Answer insisted upon subject to the objections.)

Answer. I do. The machine known as Kirby's America harvester (I believe that's the true title;) when operating this Kirby machine as a mower, the driving wheel is left free to rise or fall, vibrate up or down independent of the main frame or cutting apparatus, and while the driving wheel is thus vibrating up and down, the
90 cutting apparatus always conforms to the ground. The operation of this Kirby machine as regards the cutters conforming to the ground, independent of the driving wheel, is the same as though the driving wheel was entirely removed.

Question 6. State the difference in the modes of operation of said Kirby machine and in defendants' machine, and the difference of mechanism whereby this difference, if any, in the operations of the two machines exist, as regards the capability of the cutting apparatus in different machines when used as mowers, following the undulations of the ground.

(Objected to. Objected to by counsel for plaintiff upon the same grounds, and gives the same notice as above stated to the last question.)

Answer. The difference in the operation of these two machines, the Kirby machine and the defendant's machine, is that the Kirby

machine is operated with a stiff tongue, the driving wheel being left free, allowing the cutters to rise and fall while passing over the rough ground or other obstructions independent of the driving wheel, while the driving wheel may rise over obstructions or pass into holes or cavities without raising or depressing the cutters, allowing them to conform to the surface of the ground at all times; while the defendant's machine, in mowing, is operated with a limber tongue, the weight of the main frame, and all of the machinery being carried upon the driving wheel, which is connected rigidly to the main frame, does not allow the cutters to rais and fall while passing over rough ground or other instructions independent of the driving wheel; but the cutters may raise to pass over obstructions,

91 and while passing over an obstruction the frame is thrown down in front, the tongue being limber, allowing the cutters to raise behind, and the front end of the frame to fall proportionately, and when the cutters are so raised, passing over an obstruction with this machine, additional weight is thrown upon the driving wheel as is not the case with the Kirby machine; but if passing over an obstruction of large size, near the heel of the cutters, with defendant's machine, the outer end of the cutters would be thrown from the ground, and perhaps out of the grass by the extra amount of weight of the main frame, driver, and driving wheel, which also would not be the case with the Kirby machine, there being little weight in the frame outside of the heel of the cutters, and the driving wheel being left free to vibrate, independent of the frame. If the driving wheel or yoke is left free as is the case in the Kirby machine, the main frame would immediately drop to the ground; the outside and rear corner of the main frame which in operation should be about four inches from the ground, when thrown upon the ground, would throw the outer end of the cutter bar off the ground, say six or seven inches, there leaving no weight upon the driving wheel, the entire frame would drag upon the ground and upon the horses necks if the tongue was made stiff or rigid; while, if the tongue was left perfectly limber or flexible, the entire frame would drag upon the ground, and in either case there would be no weight upon the driving wheel to propel the knives, and *and* the outside of the main frame would drag upon the ground, throwing the cutters entirely off the ground.

Question 7. Can the defendant's machine be so arranged that the driving wheel shall be hung in a supplementary frame or its equivalent, which shall be hinged at one end the main frame,

92 while its opposite end may be adjusted and secured at various heights, or be left free as desired, whereby the cutting appratus may be held at any desired height for reaping, or be left free as desired, whereby the cutting apparatus may be held at any desired height for reaping, or be left free to accommodate itself to the undulations of the ground for mowing without reorganizing and materially changing the said machine from the form in which it is built.

(Objected to. Objected to by the plaintiff's counsel, for the same

reason as the objection stated to the fifth interrogatory, and *and* give the same notice with regard to any answer that may be given thereto. Answer insisted upon subject to objection.)

Answer. It cannot. I mean that it cannot in its present construction.

Question 8. State if you were present this morning, immediately outside of this city, where on experiment was being made with one of the defendant's combined reapers and mowers, as a mower arranged with the pin above the yoke; if so, state if you observed whether or not there was any vibration of the yoke, or whether the cutting apparatus adapted itself to the undulations of the ground.

(Objected to. Ojected to by the plaintiff's counsel for the same reasons as the objcction stated to the last interrogatory, and give the same notice with regard to any answer that may be given thereto. Answer insisted upon subject to objection.)

Answer. I was present when the experiment was being made, and I could not observe any vibration of the yoke. The pin was above the yoke through the standard, with the yoke resting against the pin all the time. The cutting apparatus did not adapt itself to the undulations of the ground, but was reaised from the ground when the wheel passed over the uneven surface, the same as when the
93 pin was through the yoke and standard, both.

Question 9. You say, in your last answer, that when the machine is arranged as there described, that the operation of the cutting apparatus was the same that it would be if the pin had been put through the yoke. What is the reason of this?

Objected to. (Objected to by plaintiff's counsel for the same reason as the objection stated to the last interrogatory, and the same notice given with regard to any answer given thereto. Answer insisted upon subject to objection.)

Answer. Because in either case, the entire weight of the main frame, driver, and a part of the cutting apparatus is carried upon the driving wheel, the front end of the yoke being hinged to the main frame, while the driving-wheel shaft being the fulcrum, the weight of the main frame, driver, and cutting apparatus shows up the rear end of the yoke until it strikes the pin, when it carries the frame the same as though it was through the yoke and standard.

AMOS WHITELEY.

J. L. Taylor deposes:

Also, Joseph L. Taylor, being by me first duly sworn, as hereinafter certified, in answer to interrogatories, deposes and says:

Question 1. What is your age, residence, and occupation?

Answer. Age, 49 years; residence, Dayton, Ohio; occupation has been for the last nine years in the reaper and mower trade. I am the agent of the defendants for selling their combined reaper and mower.

Question 2. What instructions did you give, as such agent, to purchasers of the said combined reaper and mower, as regards the arrangement of the tongue, whether loose or rigid, and as regards

the yoke, whether free or rigid, when said machine was used as a mower?

94 Objected to. (Objected to by plaintiffs' counsel on the ground, first, that this is new matter, and not rebutting testimony: second, because it is immaterial; and they now give notice that they will move for the suppression of the answer thereto upon the hearing. Answer insisted upon subject to objection.)

Answer. In relation to the tongue, I instructed them to take the bolts out, and give the tongue free play. In relation to the yoke, I instructed them to put the pin through the yoke and standard in the second or third hole from the top to make it rigid.

Question 3. State whether you had any opportunities of seeing how the machine worked as a mower when the wheel was left free; and if so, what was the effect on its operation?

(Objected to. Counsel for plaintiffs make same objection as made to the last, and gives the gives the same notice. Answer insisted upon subject to objection.)

Answer. I have. I started one mowing last week. I tried that experiment of letting the yoke go free with a limber tongue. The result was, that the outside of the frame ran into the ground; the front end of it, and the outer end of the cutter bar flew up. In fact, *in fact*, nearly the whole length of the bar was of the ground—the outer end from six to eight inches high. I then tried the experiment of stiffening the tongue, putting the bolts in, leaving the yoke to play free. The result was, that I found that the horses carried one end of the machine, and the rear end rested upon the ground. That experiment had no effect upon the cutter bar, the outer end of which was still up off of the ground. I readjusted the machine, put the pin through the yoke the second hole from the top, took the bolts out, and turned the tongue free, and the machine operated to my full satisfaction.

J. L. TAYLOR.

95 W. Ward deposes:

Also, Washington Ward, being by me first duly sworn, as hereinafter certified, deposes as follows in answer to interrogatories:

Question 1. Are you the same person of that name who has heretofore testified in this cause for the plaintiffs?

Answer. Yes.

Question 2. Were you present on the farm of Mr. Foley, in this county, on last Friday, when an experiment was being made with one of the combined the reapers and mowers of the defendants as a mower, arranged with a loose tongue and with the pin through the standard above the yoke? If so, state how the machine worked, and whether you observed whether there were any vibrations in the yoke, and whether the ground over which you passed was rough or smooth.

Answer. I was there. I watched more closely to see whether the yoke would vibrate on the standard. I couldn't discover that it changed any at all. The ground I consider was very rough for a meadow. I think Mr. Foley drove the machine when it was in that position.

WASHINGTON WARD.

S. J. Houck deposes.

Also, Sol. J. Houck, being by me first duly sworn according to law, as hereinafter certified, deposes in answer to interrogatories, as follows:

Question 1. What is your age, residence, and occupation?

Answer. Age, 35 years; residence, Clark county, Ohio; occupation, a farmer. Was agent for defendants up to the breaking out of the war.

Question 2. State what instructions, if any, you gave to purchasers of defendants' machine as to the arrangement of the tongue and of the yoke and standard when the machine was to be used as a mower?

(Objected to. Plaintiffs' counsel objected, for the same reason stated in regard to the witness Whiteley, and gives the same notice. Answer insisted on, subject to objection.)

96 Answer. I always instructed purchasers to leave the tongue limber or flexible while mowing, and to regulate the height of the cut by fastening the yoke to the standard by a pin that works through a hole in the yoke to fit corresponding holes in the standard.

SOL. J. HOUCK.

Examiner's certificate.

THE STATE OF OHIO, *Clark county, ss:*

I, John C. Miller, duly appointed as a special examiner to take the testimony of witnesses in the above-entitled cause, in which William A. Kirby and David M. Osborne were plaintiffs, and William N. Whiteley, Jerome Fassler, and Oliver S. Kelley are defendants, pending in the United States district court for the southern district of Ohio, do hereby certify that the above named witnesses, Isaac Shark, Isaac N. Kyle, Charles B. Miller, Horatio G. Miller, John D. Clark, Amos Whiteley, Joseph L. Taylor, Washington Ward, Sol. J. Houck, Jame Foley, William Minton, John Marsh, William O. Downs, were by me first duly sworn, and James T. Warder was by me first duly affirmed, to testify the truth, the whole truth, and nothing but the truth; that the foregoing testimony and depositions, by them respectively subscribed, were reduced to writing, partly by myself, and the balance thereof in my presence, by consent of the attorneys aforesaid, by James Moore, attorney for the defendants, and were written and respectively subscribed by said witnesses in my presence, and were taken on the eleventh and twelfth days of June, A. D. 1866, at my office in the city of Springfield, Clark county, Ohio, pursuant to the annexed notice, and that I am not related to, or the attorney for, either party.

97 Given under my hand as special examiner, this 12th day of June, A. D. 1866.

JOHN C. MILLER,
Special Examiner.

Deposition taken before R. E. Stillwell, examiner.

Deposition of Byron Densmore, taken before R. E. Stillwell, examiner, and used in evidence in this cause on behalf of the defendant, in the words and figures following, to wit:

Circuit court United States, southern district of Oho.

WILLIAM A. KIRBY AND DAVID M. OSBORNE *vs.* WHITELEY, FASSLER & KELLEY. } In equity.

It is stipulated and agreed by and between the parties to this case, that the deposition of Byron Densmore, taken by the defendant, in the case of Whitely *vs.* Swayne, in this court, may be read upon the final hearing of this case by either party, the same and with the same effect as if originally taken in this case.

D. WRIGHT,
For Complainants.
SAM'L S. FISHER,
For Defendants.

C. C., U. S., 7th circuit and southern district of Ohio.

WILLIAM N. WHITELEY *ag't* WILLIAM SWAYNE. } In equity.

Testimony taken under the 67th rule of the Supreme Court of the United States, on the part of the defendant.

FRIDAY, *July* 3*d*, 1863.

Present, David Wright, esq., counsel for defendant; Samuel S. Fisher, esq., counsel for complainant.

Byron Densmore deposes.

Byron Densmore, called and sworn on the part of defendant, deposes and says:

Question 1. What is your name, age, residence, and occupation?

Answer. Byron Densmore: 50 years of age; reside in Rochester, Monroe county, New York, and am a mechanic.

Q. 2. Are you the same person to whom a patent was issued for improvement in harvesters, on the 10th February, 1852?

A. I am.

Q. 3. When did you make your first machine embracing your improvement?

A. I am at a little loss to fix the date. The first machine
98 was tested two years before the reaper trial at Springfield, Ohio.

Q. 4. Was that a working and practical machine?

A. It was; it cut some ten or twenty acres.

Q. 5. Were other machines made the next season embracing said improvements? And if so, state where, how many, and what was done with them.

A. They were made at Bockport; I think the number made was 21. They were sold in this State, most of them, and a few of them in Ohio; they were used for reaping.

Q. 6. Answer the same question as applied to the next succeeding year.

A. I can't call to mind how many were built the next year, but they were built at Brockfort, New York, and at Springfield, Ohio. There were some forty, fifty, or sixty of them built, and this was the season when the reaper trial was held in Ohio, under the State Board Agriculture of that State, at Springfield, and also the year when the trial of reapers and mowers was held at Geneva, in the State of New York, in charge of the State Agricultural Society of that State.

Q. 7. Were you acquainted with Thomas S. Steadman, the patentee for improvements in clover harvesters?

Ans. I was.

Ques. 8. Where did he reside when you were acquainted with him?

A. At the village of Hawley, Orleans county, New York.

Q. 9. How far from Brockport, New York?

A. Five miles.

Q. 10. At what time did he reside at that place, and for how long?

A. A. I knew him there from 1847 or 1848 up to 1854 or 1855, and have not known his whereabouts since.

Q. 11. Were any of the machines mentioned by you operated or used in or near the village of Hawley? And if so, state in which year.

A. I sold a machine to S. D. Hurd, in the village of Haw-
99 ley, the year of the reaper trials at Springfield and Geneva, for the harvest of that year. The sale was made just before harvest. It was used there at that harvest.

Q. 12. Were you employed by Mr. Steadman to draw any papers in regard to his procuring a patent for his improvements? And if so, state when, for what improvements, and what was done in regard thereto.

A. I was. It was late in the fall of 1853, or the forepart of the winter of 1854, if I recollect right, for an improvement in a machine for harvesting clover seed. He brought me a model and drawings, and wanted me to make out the papers, which I did, and he took them. I don't know that I have any personal knowledge wher he sent them; but I had a conversation with him about them, at which he told me they had been sent back on account of some deficiency. I should say this was during that winter, or the following spring.

Q. 13. Did you understand from Mr. Steadman whether these were the first papers sent by him to the Patent Office?

A. I have no recollection on that subject of any previous papers, or of any conversation in regard to previous papers, in regard to a patent for that machine.

Cross-examined by Mr. Fisher, counsel for complainant:

Q. 14. When did you make the model which you sent to Washington for your application for your patent of February 10th, 1852?

A. I don't recollect when that model was made, but it was some time in the winter or spring before.

Q. 15. There is a large red model in the rejected case in the Patent Office, which model bears your name—when was that model made?

(Objected to. Defendant's counsel objects to this question. 1st. It assumes a fact not proved. 2d. New matter. 3d. Not pertinent to the issue.)

100 A. I have no recollection of any such model being there; there may be, however. I got up a machine and tested it in 1847 or 1848, but don't think any model was sent to the Patent Office.

Q. 16. Did you ever make more than one application for a patent for improvements in reaping and mowing machines? and did you send more than one model to the Patent Office of a reaping and mowing machine?

A. I don't recollect of sending more than one, or making more than one application.

Question 17. How did the machine, tested, in 1847 or 1848, compare with that patented February 10th, 1852, as to construction?

A. The difference was in driving the knife. The first machine the knife was driven by a cam inside of the rim of the driving wheel. The second was driven by cog gearing.

Q. 18. What do you mean by cog gearing?

A. I mean a motion was communicated from one wheel to another by one cog mashing into another.

Q. 19. Was the main wheel hung in a separate frame in the machine of 1847 or 1848?

A. I think it was.

Q. 20. Describe the manner in which it was attached to the main frame.

A. That machine has been so long out of mind, I don't know that I can call it up. My recollection of it now is, that it was hung on a separate frame, and similar to the machine patented in 1852.

Ques. 21. Are you prepared to say certainly that it was hung on a separate frame at all?

A. I am not at present, but think it was hung substantially as the machine of 1852.

101 Q. 22. To what extent was the machine of 1847 and 1848 used, and what became of it?

A. It was used to cut somewhere from five to fifteen acres of wheat, and I don't recollect what disposition was made of it. I used it enough to satisfy me that a cam was not a practical arrangement for driving the cutter. I think it was cut up or burnt up.

Q. 23. Did you mow with that machine?

A. No.

Q. 24. Is your recollection clear that the machine made by you two years before the trial at Springfield, was made like that patented Feb. 10th, 1852, so far as respects the hanging of the wheel in a separate frame, and the adjustment of that frame to the main frame?

A. It is practically the same.

Q. 25. If you filed another model in the Patent Office, might it not have been made in accordance with that?

A. No. If I filed any other model, then it was the model of the old machine. In that particular, I can't say but it is identical.

Q. 26. When did you first use one of your machines for mowing grass?

A. I can't be positive about that, but I think the next season after the reaper trials spoken of.

Ques. 27. Are you certain that you ever did use it for mowing?

A. I am, but never succeeded very much in mowing with it.

Q. 28. What change did you make in it to adapt it for mowing?

A. Left of the platform, and took out the bolts that bolted the forward end of the uper frame to the standards which connect it with the lower frame, so as to leave it to play freely.

Q. 29. Why did not this make a successful mower?

A. There was a defect in the cutter; the knife was not geared high enough; it did not run fast enough; I never made but
102 one trial with it, and that was in pretty tough grass. I was satisfied that it was practicable as a mower, and all it wanted, that I could discover, was that I had not given my knife speed enough.

Q. 30. Why did you not alter the speed of your cutter, and make it a practical mower?

A. It was about time to comence harvest west, and I had to leave it and go west in putting up reapers.

Q. 31. Why did not you make the alteration the next season?

A. I was engaged in other matters, and did not give my attention to it. I never took up the mower after that. The real cause that I did not follow the matter was, that there was some question of infringement coming up between me and McCormick. Those questions were in litigation between other parties and McCormick, and I thought I would wait until those were decided.

Q. 32. How much grass did you cut at the trial of mowing which you made?

A. From a half acre to an acre.

BYRON DENSMORE.

Subscribed and sworn to before me, this 3rd July, 1863.

R. E. STILLWELL,
Examiner, &c.

Depositions of sundry witnesses taken before J. C. Miller, on behalf of plaintiffs.

Depositions of James Foley, Abraham C. Gordon, Washington Ward, Wm. Duke, and William F. Cochrane, taken before John C.

Miller, a notary public of the State of Ohio, and speial examiner, and used in evidence on behalf of complainants, in the words and figures following, to wit:

United States circuit court for the southern district of Ohio.

KIRBY & OSBORNE, plff'ts,
ag't
WM. N. WHITELEY *et al.*, deft's.

Before me, John C. Miller, a notary public of the State of Ohio, within and for the county of Clarke, acting by permission of
103 Mason & Bowman, as attorneys for plaintiffs, and Col. Fisher, as attorney for the defendants, as special examiner of witnesses on behalf of the plaintiffs, on Thursday, the 28th day of December, 1865, personally appears the following witnesses, to wit: James Foley, Abraham C. Gordon, Washington Ward, Wm. Duke, William F. Cochrane, and Milton Hodge, all of whom were examined in my presence, (except Milton Hodge,) by consent of the attorneys aforesaid.

James Foley deposes:

James Foley being by me first duly sworn, deposes as follows:

Question 1. State your age, residence, and occupation.

Answer 1. I am 27 years old; Clarke county, Ohio; occupation, a farmer.

Question 2. Do you own one of defendant's combined reapers and mowers; and if so, of whom, and when did you buy it?

A. 2. Bought one of those machines of the defendants in February, 1864.

Q. 3. Please examine the annexed drawing, marked exhibit "A," [Here follows diagram marked page 103,] and state how the apparatus for raising and lowering the cutter bar in your machine corresponds with that exhibited in the drawing.

A. I don't see any difference, except that the yoke in my machine fits closely around the standard.

Q. 4. Were you present in the month of August, 1865, when your machine was operated as a mower, in the meadow of Milton Hodge, adjoining your farm; and if so, please state how the yoke was adjusted with reference to the standard and the pin when it was so used?

A. I saw my machine operating in Hodge's meadow, and they had the pin above the yoke, as shown in the drawing. I always
104 used it with the pin through the yoke. They mowed with it on that occasion with the pin above.

Q. 5. How did the machine cut when the yoke was adjusted with the pin above, as represented in the drawing?

A. I thought it cut very well; exceedingly well. I didn't see much difference. It seemed to cut as well as when I used it. It was a very heavy piece of grass, and it cut it off. I could not see that there was any difference than when I used it with the pin through the yoke.

Cross-examined.

Q. 1. Who were present at this experiment?

A. I think Mr. Hodge, Mr. Gordon, Mr. Campbell, Mr. Bowman, and Mr. Cochran, are all that were there beside myself.

Q. 2. At whose request did you furnish your machine for the experiment?

A. At Mr. Bowman's request.

Q. 3. How much grass did you cut at that time?

A. I could not say how much. They cut around a piece of grass that Mr. Hodge had been mowing at a number of times, but I don't know how many.

Q. 4. Can you form an idea?

A. I sholdn't like to say, for it is very difficult to tell, when his grass, that he had been mowing, was lying right alongside of it. I can form no idea.

Q. 5. You know where you began and where you left off, don't you?

A. I suppose there was about four acres standing in a square form when I got there. They cut around it several times, leaving the grass cut alongside the grass cut by Mr. Hodge. I don't think there was half of it cut, but I don't know. It is very difficult to tell, and I didn't particularly observe.

Q. 6. What is the character of the field in which the experiment was made?

105 A. The field is in low ground—that is, in the valley between the hills—meadow ground, and was a very heavy piece of grass, I though. My meadow and Mr. Hodge's join. I pastured my meadow the year before, after it was mowed, with 68 head of cattle. Mr. Hodge didn't pasture his. I think it all on accont of corn in one corner of the field in which the meadow was.

Q. 7. Was the ground level?

A. Well, yes; it was moderately level. It is passable for machines.

Q. 8. Why was the pin taken out of the yoke and put above it?

A. I don't know, only that these gentlemen wanted to see whether it would work that way or not.

Q. 9. Why didn't they take the pin out altogether, and leave the end of the yoke free?

A. I don't know.

Q. 10. Did they do it?

A. I think not; not that I saw. If they did, I did not see it.

Q. 11. Has your yoke a hole through it to pass the pin through, so as to fasten it to the standard?

A. Yes, sir.

Q. 12. How have you always used your machine in mowing?

A. I believe I have always used mine with the pin through the yoke.

Q. Why didn't you take the pin out and put it above?

A. Well, I guess I never knew that it would work above. When

I got my machine, I got a card with printed directions, and I went by them.

(Signed) JAMES FOLEY.

A. Gordon deposes:

Abraham Gordon being by me first duly sworn, deposes:

Q. 1. State your age, residence, and occupation.

A. Age, 20 years; residence, Clarke co., O.; occupation, farmer.

Q. 2. Did you hear the testimony of James Foley, just taken?

A. Yes, sir.

Q. 3. Who drove the machine on the occasion referred to by him?

A. I drove it.

106 Q. 4. How did it cut when adjusted as he describes?

A. I didn't see much difference in it. It cut well.

Cross-examination.

Ques. 1. How much did you cut?

A. It is hard to tell. I suppose we went about eight times around the piece.

Q. 2. What was the width of the cut of the machine?

A. It cuts five feet, I believe.

Q. 3. What sort of ground was it?

A. The ground was tolerably level, and in good order for mowing?

Ques. 4. Was the machine used with the pin entirely removed from the standard?

A. No, sir.

(Signed) ABRAM C. GORDON.

W. Ward deposes:

Washington Ward being also first duly sworn by me, deposes:

Q. 1. What is your age, residence, and occupation?

A. Age, 32; residence, Clarke co., O.; occupation, I have been a farmer until the last two years.

Q. 2. Did you ever own one of the defendant's combined reapers and mowers; if so, when, and of whom did you buy it?

A. I owned one in partnership with a tenant on the farm; bought it of the defendants. I think I bought it in June, 1864.

Q. 3. How often, and to what extent did you use it as a mower?

A. The first season I cut about 30 acres of grass myself. The tenant, I suppose, cut as much likely, and I suppose we each cut about as much the second season.

Q. 4. Please examine the annexed drawing, marked "complainants' exhibit a," and state how the raising and lowering apparatus of your machine corresponds with that exhibited in the drawing.

A. I think that my machine is constructed the same as the drawing.

Q. 5. In using your machine as a mower, how did you adjust the yoke on the standard, in reference to the pin.

107 Ans. When I first commenced using it I placed the pin in the third hole, I think, from the top of the standard. When

I got into very rough ground, I put the pin in the topmost hole of the standard.

Q. 6. Did you place the pin through the yoke and the standard, or through the standard only, above the yoke?

A. I placed it through the standard only, above the yoke, as a mower. Now I did that only as an experiment, in rough ground, to see whether it would give any more play to the cutter bar. My impression is, that I made some change in the position of the tongue.

Q. 7. How often was your machine used with the pin through the standard only, above the yoke?

Ans. I used it part of the season, and in smooth ground. I always used it above the yoke.

Q. 8. How did the machine work when the pin was above the yoke?

A. It cut very well in smooth ground, and I thought it cut lower than when the yoke was fastened.

Cross-examination.

Ques. 1. How was it in rough ground with the pin above the yoke?

A. The ground that I tried it in was very rough, and it was very hard to tell whether it would make any difference or not. It cut very well, but it was a very rough piece of ground, hardly fit to take a machine in, and it is difficult to tell whether it would make any difference.

Q. 2. If it cut very well in rough and smooth ground, why do you specify smooth ground only in your direct examination?

A. I tried the machine in every way I could try it to satisfy my own mind which was the best way. I tried it in smooth ground, both by the pin above the yoke, and I think I had it in all the thee
108 first holes. I did that to test the machine, to see which way it would cut the best; to see whether it would make any difference in the cut or the ground.

Question repeated.

Ans. I didn't wish to make any distinction as to rough ground. What I wished to say was, that I place the machine in that position in rough ground to see whether it would work as well, but the ground was so very rough it was difficult to tell.

Q. 3. How much did you use the machine in rough ground with the pin above the yoke?

A. I think the first season we had about five acres of very rough ground. I am under the impression that we cut the most of it with the pin above the yoke, but we started with the pin through the yoke.

Q. 4. Did you do good mowing?

A. We did very good mowing for the condition the ground was in.

Q. 5. How did it compare with your mowing on smooth ground?

A. It compared favorably considering the condition the ground was in; the grass, of course, was cut uneven.

Q. 6. Why didn't you take pin out of the standard altogether, and leave the yoke free?

A. I suppose the top hole was as far as it could go conveniently.

Q. 7. Suppose the pin had been taken out entirely, what would have been the effect on the machine?

A. Well, I don't know whether there would have been enough play to have thrown it off of the standard, but I suppose likely there night.

Q. 8. Was there a hole through the yoke through which the pin might go?

A. I think there was. It certainly must have been made stationary as a reaper.

Q. 9. Were not your directions to make it stationary as a mower?

A. I can't say. It has been sometime since I have seen the
109 *the* directions.

Q. 10. Why then do you call putting the pin above the yoke an experiment?

A. I don't know that I called it an experiment, putting the pin above the yoke. I simply meant by changing the pin in the standard, whether it would make any difference in the cut; I don't know as I spoke of the pin above the yoke or through the yoke as an experiment.

Q. 11. Look at direct question and answer No. 8, and answer my last question.

A. Changing of the position of the pin is what I meant as an experiment.

Q. 12. In your answer to direct question No. 6, you say, "I did that only as an experiment in rough ground, to see whether it would give any more play to the cutter bar." Do I understand you now to say that that answer is incorrect?

A. I placed it there as an experiment, as I said before. I placed it I think above the yoke.

Q. 13. Didn't you understand that the ordinary way of using the machine was with the pin through the yoke?

A. I don't recollect that I did. I don't know whether the directions said through the yoke or not. It might be that they did, but I don't recollect distinctly. I think there were printed directions with the machine.

Q. 14. Was the pin so constructed as to pass through the yoke and the standard?

A. Yes, I think it was.

Reexamination:

Q. 1. In your use of this machine as a mower did you generally put the pin through the yoke or above it?

A. I generally put it above the yoke as a mower.

(Signed) WASHINGTON WARD.

W. Duke deposes.

William Duke, of lawful age, deposeth and saith as follows:

Q. 1. What is your age, residence, and occupation?

A. 28 years old; residence, Clarke co., O.; occupation,
110 farmer.

Q. 2. Do you own one of defendant's combined reapers and mowers; and if so, when and of whom did you buy it?

A. I own one of their reapers and mowers. I bought in 1863, of Whiteley, Fassler & Kelly; I have used it three seasons.

Q. 3. Please examine the annexed drawing, marked "complainant's exhibit A," and state how the raising lowering apparatus of your machine corresponds with that exhibited in the drawing?

A. I believe it is about the same, only I don't see a hole through the end of the yoke.

Q. 4. Did you ever use your machine as a mower, with the pin put through one of the holes of the standard above the yoke?

A. Yes, sir.

Q. 5. In what year did you first use it?

A. I think the first year I used it some in that way.

Q. 6. What caused you to adjust it in that way?

A. I had no person to help me when I went into the field, and it was difficult to raise it and put it through the yoke and standard, and I just thought I would try it in that way to see if it wouldn't do just as well.

Q. 7. About how often have you used it in that way? Frequently or not?

A. Well, I had to use it quite frequently that way.

Q. 8. How did it cut the grass when you used it in that way? Well, or not?

A. It cut it very well.

Cross-examination:

Q. 1. How did you use it when you had help to adjust it?

A. I generally put it through the yoke and made it tight.

Q. 2. Why did you do that?

A. I thought that way the way it should be.

(Signed) WM. R. DUKE.

W. F. Cochrane deposes.

111 Also, at the same time and place, William F. Cochrane, of lawful age, being produced and sworn, deposeth and saith as follows:

Q. 1. State your name, age, residence, and occupation.

A. William F. Cochrane; age, 34; residence, Rochester, N. Y., and occupation, mechanical engineer.

Q. 2. What opportunities have you had of witnessing the practical operation of reaping and mowing machines in the fields?

A. I have attended a good many trials of reapers and mowers, and have examined carefully the different machines as to their adaptation to reaping and mowing on rough and smooth ground. I have seen Mr. Whiteley's machine used as a reaper and mower on rough and smooth ground, and it performed it work better on rough ground when the pin was above the auxilary frame, giving the wheel an independent action in the auxilary frame from the main frame.

Q. 3. State if you were present at the meadow of Milton Hodge,

with James Foley and others, in August, 1865, when one of Whiteley's combined machines was operated as a mower?

A. Yes, I was present.

Q. 4. Please examine the annexed drawing marked "complainant's exhibit A," and state how the raising and lowering apparatus of the machine then operated corresponds with the drawing.

A. It corresponds with the drawing.

Q. 5. Have you seen and are you acquainted with the mode of construction of the raising and lowering apparatus of the combined machines manufactured by the defendant in 1862, for the harvest of that year? and if so, state how it corresponds with that of
112 Foley's machine in the mode of construction and principle of operation.

A. It is precisely the same in their one wheel combined machine, self-raker.

Q. 6. State how the yoke of Foley's machine was adjusted on the standard when operated in Hodge's meadow before referred to.

A. We started it with the pin through the yoke and standard. In that way it performed its work well. We then tried it with the pin above the yoke, and it performed equally well; and where the ground was uneven, the pin being above the yoke, leaving the main wheel free in its bearings up and down the standard, it worked easier; less tension on the horses necks, and cut in several instances where it could not have done if the pin had been through the yoke and standard.

Q. 7. How was the traction of the main wheel when the pin was adjusted in the standard above the yoke?

A. Independent of the main frame and free to follow the unevenness of the ground, always producing the traction of its own weight upon the driven mechanism, providing an uninterrupted motion to the cutting apparatus.

Q. 8. State whether or not, when the machine was so adjusted, there was any lack of traction of the main wheel for the successful operation of the machine?

A. No lack of traction, but the full weight of the main wheel followed the ground without interruption.

Q. 9. To what extent were there inequalities in the meadow of Hodges in which the machine was operated?

A. A variation from ten to sixteen inches.

Cross-examination:

Q. 1. When did you ever see a Whiteley machine operate
113 with the pin above the yoke, except in Hodge's meadow?

A. At the trial at Jamestown last harvest. That was a Whiteley machine, but a two-wheeled machine. There was no hole in the section plate. The sector had holes in it through which the pin was put, and is the same as the Kirby machine in that respect. I have seen a Whiteley one wheeled operated on Mad River, in Clarke county. I think on sheriff Layton's farm. I am not sure whether in 1863 or 1864. I think it belonged to a man by the name

of Leffel, but I am not certain. That machine was operated with the pin above the yoke, through the yoke, and in all ways. I went to try the machine.

Q. 2. If the pin was removed from the standard altogether what would be the effect on a one-wheeled machine.

A. It leaves the ground wheel to play freely upon its axis of motion, and to adapt itself to the unevenness of the ground.

Q. 3. What would become of the main frame?

A. The weight of the rear end of the main frame would be sustained by the cutter bar; the front end would come upon the tongue.

Q. 4. It would come to ground, wouldn't it?

A. Not until the angle of the tongue had exhausted the depth of the yoke, and then it would come down to the top of the yoke, and then the weight would be born up by the horses.

Q. 5. Would the machine be successful and practically operative with the pin removed from the standard?

A. As a mower in rough ground, it would be successful; otherwise it would not.

Q. 6. When the pin is above the yoke and the machine is standing or mowing over smooth ground *ground*, with a loose tongue, does not the yoke rest against the pin?

114 A. If this pin was in the uper hole, and the standard is sufficiently long, the yoke would not rise to the pin. With the machine as constructed, in ordinary ground, it would come up to the pin.

Q. 7. Is it possible for the driving wheel to rise with reference to the main frame when the pin is above the yoke?

A. In cases where the pin is used above the yoke, it is generally put in the second or upper hole of the standard, so as to allow the driving wheel to play freely between the main frame and pin. It certainly cannot get over the pin.

Q. 8. If the pin is removed from the standard, will not all the weight of the machine be removed from the driving wheel?

A. No, sir; the greater part of it, however, would be removed.

Q. 9. Wher would the weight be transferred?

A. To the ground.

Q. 10. If the machine were suspended by the tongue, that weight would be transferred to the horses' necks, would it not?

A. Not all of it. The greater portion of it would rest upon the driving pinion and teeth of the main wheel. That portion which was not borne up by the pinion and the teeth of the main wheel, would be transferred to the horses' necks.

Q. 11. Would that make it any easier for the horses?

A. I don't think it would.

Q. 12. What would be the tendency of the forward movement of the main wheel, to lift the main frame from the ground, or to carry it to the ground?

A. Tendency to the ground.

Reexamination:

Q. 1. In operating the machine with the pin entirely withdrawn from the standard, would or not, the tongue have to be made rigid or very nearly so?

A. Very nearly so.

Recross-examination:

115 Q. 1. And then would not the weight be increased upon the horses' necks?

A. A little.

Q. How much?

A. That portion of the forward part of frame which would not be able to sustain itself.

(Signed) WM. F. COCHRANE.

Examiner's certificate.

STATE OF OHIO, *Clarke county, ss:*

I, John C. Miller, a notary public, of the State of Ohio, in and for the county of Clarke, and acting by consent of counsel hereinbefore named, as special examiner in the hereinbefore entitled cause, do hereby certify, by the consent of the said counsel, as follows:

That the above-named James Foley, Abram C. Gordon, Washington Ward, William Duke, and William F. Cochrane were by me first duly sworn to testify the truth, the whole truth, and nothing but the truth, and that the foregoing depositions, by them respectively subscribed, were reduced to writing, partly by myself, and the balance thereof by consent of the attorneys aforesaid, by Col. Fisher, attorney for defendants, and were written and respectively subscribed by said witnesses in my presence, and were taken by consent of the attorneys aforesaid, on the 28th day of December, A. D. 1865, at the office of Mason & Bowman, in the city of Springfield, Clarke county, Ohio.

Given under my hand and official seal this 28th day of December, A. D. 1865.

(Signed) JOHN C. MILLER,

Notary Public of Clarke county, Ohio, and special examiner. [SEAL.]

116 *Defendant's Exhibit No. 1.*

In words and figures following, to wit:

The U. States Patent Office to all persons to whom these presents shall come, greeting:

This is to certify, that the annexed is a true copy from the records of this office, of the letters patent granted B. Densmore, Feb'y 10th, 1852, No. 8,720.

In testimony whereof, I, T. C. Theaker, Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed, this

twentieth day of June, in the year of our Lord one thousand eight hundred and sixty-six, and of the indpendence of the United States the nineteenth.

T. C. THEAKER. [SEAL.]

No. 8,720.

The United States of America, to all to whom these letters patent shall come :

Whereas, Byron Densmore, of Sweden, N. Y., has alleged that he has invented a new and useful improvement in grain harvesters, which he states has not been known or used before his application; has made oath that he is a citizen of the United States; that he does verily believe that he is the original or first inventor or discoverer of the said improvement, and that the same hath not, to the best of his knowledge and belief, been previously known or used; has paid into the Treasury of the United States the sum of thirty dollars, and presented a petition to the Commissioner of Patents, signifying a desire of obtaining an exclusive property in the said improvement, and praying that a patent may be granted for that purpose. These are therefore to grant, according to law, to the said Byron Densmore, his heirs, administrators, or assigns, for the term of
117 fourteen years from the tenth day of February, one thousand eight hundred and fifty-two, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvement, a description whereof is given in the words of the said Densmore, in the schedule hereunto annexed, and made part of these presents.

In testimony whereof, I have caused these letters to be made patent, and the seal of the Patent Office has been hereunto affixed.

[L. S.]

Given under my hand, at the city of Washington, this tenth day of February, in the year of our Lord one thousand eight hundred and fifty-two, and of the independence of the United States of America the seventy-sixth.

ALEX'R H. STUART,
Secretary of the Interior.

Signed and sealed with the seal of the Patent Office.

THOS. EWBANK,
Commissioner of Patents.

[Here follows diagram, marked 117.]

Schedule referred to.

The schedule referred to in these letters patent and making part of the some.

To all to whom these presents shall came :

Be it known that I, Byron Densmore, of the town of Sweden, in the county of Monroe, and State of New York, have invented a new

and useful improvement in reaping machines for cutting wheat and other small grain, and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making part of this specification, in which fig. 1 is a perspective view of the machine;
fig. 2 is a vertical longitudinal section through the driving
118 wheel, showing the reciprocating lever, the springs, the cords that connect the reciprocating lever to the rake, the pulleys that conduct the cords and the teeth of the rake; fig. 3rd is a view of the platform with the covering of the rake removed, showing the finger piece and fingers, the sickle, the plates that support the sickle, the parallel rods on which the rake vibrates the rake; the attachment of the cords to the rake, the pulleys, the crank on which the small ground wheel is hung that carries the left side of the machine and the winch for adjusting said crank; fig. 4 the is a view of the outer-side of the grooved cam showing the ratchet wheel, the hand and spring that holds the hands into the ratchet wheel, fig. 5th is a vertical longitudinal view of the plates that support the sickle; fig. 6th is a view of the back tooth of the rake. My invention and improvements consist in new arrangement for raking the grain from the machine, likewise in a new arrangement for reaising and lowering the machine to vary the height of the cut; also in a new mode of hanging the sickle, which will be particularly described. The same letters indicate like parts in all the figures. The finger piece (H) is made fast to the parallel hounds (A and a;) to these hounds the tongue is attached. The team is harnessed to the tongue in the usual manner. The frame (B and b) is attached to the hounds (A and a) a few inches in front of the finger piece, by straps of iron,
as at (C) fig. 2; these straps of iron are bolted to each side of
119 the hounds, and extend up on the sides of the side pieces of the frame, and a bolt passes through the tops of these straps, and through the side pieces of the frame (B b) and from a hinge; the front end of the frame is fastened to the upright pieces (D D) by bolts, and these bolts are shifted into different holes in these upright pieces to vary the height of the cut. The seat for the driver is formed on the upright pieces. The axle of the driving wheel (E E) has its bearings on the side pieces of the frame, (B and b,) so far back as only to leave room for the driving wheel to run clear of the back cross-piece of the frame; to the center end of the axle of the driving wheel, is attached a master-spur cog wheel that meshes into a pinion in front of it, which is hung on a short arbor that has one of its bearings on the underside of the side piece (b) of the frame, and the other, bearing on the under side of a piece of timber, framed parallel to the side piece, (b,) and about eight inches outside of it. Outside of the spur pinion, on the same arbor, is a level cog wheel that meshes into a pinion that is hung on an arbor which has its bearings on the cross girts of the frame, and extends back of the frame; on the back end of this arbor, is hung a small fly-wheel that has an inner wrist through the plain of it, about $2\frac{3}{8}$ inches from the center which forms a crank that drives the sickle; to

this pin or wrist is attached a rod or pitman, which is connected to the sickle, (d d d d,) fig. 3rd. The sickle, instead of resting upon the
120 fingers (e e e e e e e e e e) in the usual way for support, is supported by the iron plate (f f f,) fig. 3 and 5; these plates, are made fast to the edge of the finger piece (H,) and project in front of it, say 2½ inches, and thus form a bearing for the sickle or blade in sections, separate from the fingers, and the fingers are so shaped as not to touch the sickle more than ¼ of an inch back of the cut, but are grooved out in the rear or under the back part of the sickle, say ¼ of an inch, thereby preventing choking by giving the straws room to slide or drop out. The small ground wheel (F) that carries the left side of the machine is hung on the crank (h,) fig. 1 and 3, which is supported by boxes each side of the wheel, made fast to the frame (G G;) the centre end of this crank or its shaft is made square, and the holes in the end of the lever (g) are fitted to it, one diamoning, and the other, square. To vary the hight of the cut at the left side of the machine, the lever (g) is taken off from the crank and shifted as desired, and then fastened down to the frame at (g.) The grooved cam (M) is hung on the inner end of the axle of the driving wheel, and is made to turn upon it like a loose pully, and is made to revolve with the driving wheel, when necessary, by the hand (I,) fig. 4, holding in the ratchet wheel (I.) The circular spring (J) holds the hand into the notches of the ratchet wheel, and prevents it from falling out when it passes the underside. The friction roller, (k,) fig. 2, works on the groove of the cam (M,) it is attached to the
121 reciprocating lever (k) at (I,) fig. 2; the lever, is attached to the frame, say 15 inches in front of the friction roller at (2) by means of a plate of iron, which is bolted to the under side of the lever (K;) this plate has bearings projecting out each side of the lever to which are fitted boxes that are bolted to the frame forming a hinge on which the lever vibrates; the front end of this lever is turned upwards, and extends forward of the point of attachment to the frame, say 15 inches, as at (3,) fig. 2, and is attached to the spring (m) in the manner hereinafter described. As the groove cam (M) revolves, the friction roller (K) is moved downwards from (I) to (4,) fig 2; and the lever (K) is moved downwards with it, and the back end of the lever (K) is made to pass down from (5) to (6) a distance equal to the length of the platform (G;) then the friction roller (K) presses against the inner flange (r r) of the cam, and the lever is forced back to (5) again. To the back end of the reciprocating lever (K) is attached the three cords, but chains or straps may be used. Two or three cords pass down at (7 7,) fig. 2, around the pully (o^1) along the end of the platform, and one of them turns around the pulley (o^2,) fig. 3, and is attached to the back end of the rake at (P,) fig. 3; the other cord passes around the pulley (o^3,) and is attached to the end of the rake nearest the finger piece; these cords are attached to small blocks of wood (P) and (p,) fig. 3; these blocks have holes through them, fitting the parallel rods, (Q Q) and (q q,) and slide on these rods.

122 The third cord passes upwards and around the pulley (o^4;)

thence to the pulley (o^5,) fig. 1; then to the pulley (o^6,) and is attached to the centre of the rake at (8,) fig. 3. Thesecords being then attached, as the reciprocating lever (K) descends from (5 to 6,) the rake is made to slide across the platform, from right to left, on the parallel rods (Q Q & q q.) The rake is made by putting a rod (s s) of half inch round iron, say two feet long, through corresponding holes in the blocks (P & p) at right angles with the parallel rods (Q Q & q q,) to this rod (s s;) the teeth, f f f, fig. 2, of the rake, are attached to the lower end of the back rake; tooth (f^1) is made to extend a little below the transverse rod (s s,) to which the rake teeth are attached, as at (2,) fig. 6. When the rake passes from right to left across the platform, the teeth turn down the upper ends to the platform, and when it comes to the left side the lower end of the back tooth (f^1) strikes the small hook at 9, fig. 3, and the teeth raise up; and they are prevented from falling down, while they pass to the right side of the machine, by the pressure of the grain against them. In case the pressure of the grain comes wholly against one tooth, as it is liable to, the rake is prevented from turning and one end getting ahead of the other, and thus cramping on the rods on which it runs, by the manner the cords are attached to it; the two cords that move it from the left to right being attached to each end of the rake, and the one that moves it back being attached to the centre. The grooved cam is so formed as to move the rake from left to
123 right across the platform, with about three times the velocity that it moves from right to left; consequently the grain is discharged at the right side of the machine with great motion. It is necessary to have the rake so arranged that the gavels can be left at different distances apart in thin and thick grain, that the gavels may at all times of suitable size for binding. This is effected by placing the small lever (R) on the top of the side piece (B) of the frame; the back end of it is above the centre of the ratchet wheel, and turned in towards it; the forward end of it extends forward to the driver's seat; it is attached to the side piece of the frame by a bolt about five or six inches from the back end on which it turns. The back end of the lever is held up to the ratchet wheel by a spring, and as the hand (I,) fig. 4, comes to the upper side, it strikes against the back end of the lever and is thrown out of the notches of the ratchet wheel, and the rake stops. The rake at this time is at the left side of the platform always, and the rake stands still until the driver presses his leg against the front end of the lever (R) and bears it inwards, which throws the back end out from under the hand, and the rake is put in motion; or the rake may be made to throw off the grain any given distance between one and two revolutions of the driving wheel, by pins projecting out from the plain of the rachet wheel, which could be so arranged as to throw out the back
124 end of the lever from under the hand, and put the rake in motion after it had been stopped a quarter, a half, or a whole of a revolution of the driving wheel; that is, four such pins placed on the four quarters of the crachet wheel would not allow of the rake being stoped but one fourth of a revolution of the driving wheel;

two would not allow of its stopping but one half of a revolution; and one would allow it to be stopped one entire revolution before it would be put in motion again. The hand (Y) is used for the purpose of preventing the cam (M) from turning backwards when the hand (I,) fig. 4, is raised out of the notches of the ratchet wheel (i.) It is made fast to the inside of the side piece (B) of the frame, and catches in the notches of the rachet (2,) fig. 4. The grain being raked off from the machine with a quick motion, it is desirable to have some means of accumulating power while the rake is returning from right to left, to assist in throwing off the grain. For this purpose the front end of the lever (K) is attached to the spring (m.) As the back end of the lever (K) is forced downwards, the front end ascends and draws the spring towards the frame. The spring (m) is made very stiff. Now as the back end of the lever (K) moves upwards and moves the grain on the platform, the spring pulls downwards on the front end of the lever with great power, thus relieving the pressure on the cam (M) very much. But it is evident that if the chain (T) was attached to the front end of the lever (K) and to the
125 spring (m) directly, the spring would exert a much greater power on the lever where it was drawn upwards to its highest point, than when it was down to its lowest point, and the spring would be springing a distance equal to the space the front end of the lever passed through. To avoid these objections the double eccentric (u) is used. It is a piece of cart iron, with a one half inch iron rod passing through it, on which it turns as an axis. This rod is supported by two irons that project out in front of the frame (B b.) The chain (T) is attached to the front end of the lever (K) and to the largest eccentric at the point farthest from the axis; and the chain (V) is attached to the end of the spring (m) and to the smallest eccentric at the point farthest from the axis; and these chains are so arranged on the eccentric that as the one winds on the other unwinds, vice versa; and the eccentrics are so arranged that as the front end of the lever (K) ascends the line of draft of the chain (T) is thrown off farther and farther from the axis of motion of the eccentric, while at the same time the line of draft of the chain (V) comes nearer and nearer the axis. Thus, the power to move the springs, or the leverage on it to move it, is increased as the spring becomes stiffer, by being drawn towards the frame, and the circumference of the eccentric on which the chain (T) winds in about double the circumference of the one that the chain (V) winds on. Hence the spring only about half the distance the front end of the lever (K) moved by this
126 arrangement, the power of the spring on the lever is made equal in all positions or raised, as may be desired. The reel (*W*) is made, supported, and operated in the usual manner. The board (X) is attached to the divider (Y) by a hinge joint, that it may be raised and lowered with the reel and kept at all times so that the arms of the reel will but just clear it, that grain may not lodge upon it. There is a wire, not shown in the drawings, running down from the board (X) obliquely to the platform, in front of each rake tooth, to keep the grain clear of the rake teeth while they are raised up.

What I claim as my invention, and desire to secure by letters patent, is—

1st. The combination of the grooved cam (M) and reciprocating lever (K,) so arranged with each other as to give to the rake, while in the act of clearing the platform of grain, an increased rapidity of motion as compared with its backward movement.

2nd. Controlling the motion of the rake by means of the combined action of the hand (I,) ratchet (i,) and lever (R,) as set forth.

3d. The arrangement of the double eccentric U) for equalizing the power of the spring (m) on the lever (K,) in the manner described.

4th. Forming supports for the vibrating blade or sickle by the plates (f f f,) in sections separate from the fingers, to prevent choking, as described and represented.

BYRON DENSMORE.

Witnesses: HIRAM MOORE.
L. BURROWS.

Defendant's Exhibit No. 2.

Defendant's exhibit No. 2, in the words and figures following, to wit:

The United States Patent Office to all persons to whom these presents sall come, greeting:

This is to certify that the annexed is a true copy from the
127 files of this office of the file wrapper and contents, in the matter of the reissued letters patent granted D. M. Osborn and W. A. Kirby, assignees of Byron Densmore, January 28, 1862.

In testimony whereof, I, D. P. Holloway, Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed, this twenty-fifth day of May, in the year of our Lord one thousand eight hundred and sixty-three, and of the independence of the United States the eighty-seventh.

[SEAL.] D. P. HOLLOWAY.

The petition of Densmore's assignees for a new patent.

To the Commissioner of Patents:

The petition of David M. Osborne, of the city of Auburn, and William A. Kirby, of the city of Buffalo, and State of New York, assignees of the whole interest of Byron Densmore, of the town of Sweden, county of Monroe and State aforesaid, respectfully represents:

That the said Byron Densmore did obtain letters patent of the United States for certain improvements in harvesting machines, which said letters patent are dated on the 10th day of February, 1852; that they now believe the same is inoperative and invalid by reason of a defective specification, which defect has arisen from inadvertence and mistake. They, therefore, pray that they may be allowed to sur-

render the same, and request that new letters patent may be issued to the said assignees for the same invention for the residue of the period for which the original patent was granted, under the amended specification herewith presented; they, the said assignees, having paid thirty dollars into the Treasury of the United States agreeably to the requirements of the several acts of Congress in that
128 case made and provided.

D. M. OSBORNE.
WM. A. KIRBY.

Witnesses: CHARLES H. GARLICK.
J. H. OSBORNE.

STATE OF NEW YORK, *County of Cayuga, ss:*

On this 17th day of April, 1861, before the subscriber, a justice of the peace, personally appeared the above-named David M. Osborne, and made solemn oath that he verily believes that by reason of an insufficient or defective specification the aforesaid patent of the said Byron Densmore is not fully valid and available to the said assignees, and that the said error has arisen from inadvertence, accident, or mistake, and without any fraudulent or deceptive intention, to the best of his knowledge and belief.

HORACE T. COOK,
Justice of the Peace.

STATE OF NEW YORK, *County of Cayuga, ss:*

On this 17th day of May, 1861, before the subscriber, a justice of the peace, personally appeared the above-named Wm. A. Kirby, and made solemn oath that he verily believes that, by reason of an insufficient or defective specification, the aforesaid patent of the said Byron Densmore is not fully valid and available to the said assignees, and that the said error has arisen from inadvertence, accident, or mistake, and without any fraudulent or deceptive "intention," to the best of his knowledge and belief.

H. B. BURT,
Justice of the Peace.

Power of attorney.

In the matter of the above specification I hereby constitute and appoint D. M. Osborne as my attorney, with full power and authority to act for me, the same as though I was personally present and acting for myself.

WM. A. KIRBY.

To all whom it may concerne:

Be it known, that Byron Densmore, of the town of Sweden, in the county of Monroe, and State of New York, assignor to David
129 M. Osborne, of the city of Auburn, and William A. Kirby, of the city of Buffalo, and State aforesaid, heretofore invented certain new and useful improvements in harvesting machines:

Now, therefore, we, the said david M. Osborne and William A. Kirby, assignees of the whole interest of the said Byron Densmore as aforesaid, do hereby declare that the following is a full, clear, and exact description of the construction and operation of the said invention and improvements; reference being had to the accompanying drawings making a part of this specification, in which—

Fig. I is a perspective view of the machine; fig. II is a vertical longitudinal section on the line X Y of fig. III; fig. III is a top plan of the machine; fig. IV is a vertical longitudinal section through the driving wheel, showing the combination of the main and supplementary frames; fig. V is a view of the outer side of the grooved cam, showing also the ratchet wheel; fig. VI is an elevation of the guard finger; fig. VII is a section of a plate or secondary finger placed intermediate between a portion of the guard fingers to support the sickle or cutters; fig. VIII is a view of the back tooth of the rake; fig. IX is a view of the outside ground wheel. The nature and principle of the said invention relate: 1st, to the construction and combination of two frames—the one for supporting the driving wheel, and the other for supporting the cutting apparatus,

Amendment A.

A, and hinging the said frames together in such manner that the driving wheel and cutting apparatus may each follow the inequalities of the ground independently of the other, and also that they may be bolted rigidly together for sup-
130 porting the cutting apparatus at any desired height.

2d. In providing a ground wheel with crank and lever for reaising and lowering the outer end of the finger bar. Letters of like name and kind refer to like parts in each of the figures. A represents the main frame of the machine which consists of several pieces of timber properly framed and bolted together. This frame carries the finger bar and cutting apparatus as herein described. B are two upright posts forming part of the main frame for the purpose of supporting the driver's seat, and for forming an adjustable connection with the supplemental or wheel frame. C represents a supplemental frame in which the driving wheel is hung; it is hinged to the main frame by means of bolt and hinge plate as shown at d, so as to allow it to have a hinge or joint-like motion; the object being to have a hinge or joint-like connection between the two frames, so as to allow an independent movement of each frame. The particular manner of forming the hinge or joint connection is not deemed important; any mechanical means by which the end is secured will answer the principle of the invention. The opposite end of the frame moves in the arc of a circle and in close proximity to the upright posts B, so that it may be made fast to said posts by means of bolts passing through said posts and frame at either of the several bolt holes *b*, by which means an adjustability is secured and the cutting apparatus thereby raised and lowered and supported at any desired height from the ground when reaping. When desired, the adjusting bolts may by removed entirely, and this end of the frame left free to oscil-
131 late or swing from its hinges according to the unevenness of the ground, over which the driving wheel passes, may requiree

By this combination and connection of the two frames it is evident that the driving wheel when moving may pass over uneven surfaces without causing an elevation or depression of the finger bar and cutting apparatus, and the finger bar and cutting apparatus may also conform to the inequalities of the ground independently of the position of the driving wheel, and a uniform flexibility between the two frames constantly maintained; the elevation or depression of the driving wheel and the elevation or depression of the cutting apparatus (occasioned by the uneven surfaces of the ground over which the machine passes) not being simultaneous nor dependent one upon the other. The axle of the driving wheel has appropriate bearings upon the side pieces of the supplemental frame as shown at C, fig. III.

In the matter of the application of David M. Osborne and William A. Kirby, assignees of Byron Densmore for reissue of letters patent granted to the said Densmore, on the 10th day of February, 1852, for improvements in harvesting machines:

STATE OF NEW YORK, *County of Erie, Willam A. Kirby, ss:*

On this 25th day of December, 1861, before the subscriber, a justice of the peace of the county of Erie, and duly authorized to adminter oaths, personally appeared the above-named William A. Kirby, and made solemn oath that he verily believes that by reason of an insufficient or defective specification the aforesaid patent is
132 not fully valid and available to said assignees, and that the said error has arisen from inadvertence, accident, or mistake, and without any fraudulent or deceptive intention, to the best of his knowledge or belief.

CHARLES GARDNER,
Justice of the Peace, Erie County, N. Y.

STATE OF NEW YORK, *County of Cayuga, ss:*

On this the second day of January, 1862, before the subscriber, a justice of the peace, of the county of Cayuga, and duly authorized to administer oaths, personally appeared the above-named David M. Osborne, and made solemn oath that he verily believes that by reason of an insufficient or defective specification the aforesaid patent is not fully valid and available to said assignees, and that the said error has arisen from inadvertance, accident, or mistake, and without any fraudulent or deceptive intention, to the best of his knowledge or belief.

HORACE T. COOK,
Justice of the Peace.

The gear wheels for communicating motion to the cutters are shown at 1, 2, 3, 4, each hung in a common manner upon its appropriate shaft as shown in figure III. The ground wheel F, shown in figs. I, III, and IX, is hung on the crank *h*, which crank is supported by the boxes on each side of the wheel made fast to the frame G, or it may be supported on the finger bar or divider in any convenient manner, so that the whole wheel may be made to adjust and carry

the outer end of the finger bar as described. One object of hanging this wheel on a crank shaft, with a lever attachment thereto, is to provide a means for conveniently raising and carrying the outer end of the cutting apparatus free from the ground when it is de-
133 sirable to move the machine from place to place. Another object is to afford a means for raising, lowering, and supporting the outer end of the finger bar and cutting apparatus at different heights from the ground when the machine is used for reaping. The essential feature of this part of the invention is hanging the wheel upon a crank shaft with the crank and lever for operating the same, so that purpose of raising and lowering the outer end of the finger bar is attained. The precise details of the arrangement is not deemed important. The finger bar H is made fast to the side pieces of the main frame upon the upper side of the said pieces by bolts or otherwise, as shown at a^1, so that the inner side piece will serve as an extension shoe or runner to slide over the stubble or mown grass and protect the heel of the cutters; D^n, driving wheel; Z, draft pole attached to the main frame and to which the team is harnessed in the common manner. Having thus fully described the construction and operation of the said improvements, what we claim as the invention of the said Byron Densmore is—1st. Hanging the driving wheel in a supplementary frame or its equivalent, which is hinged at one end to the main frame while its opposite end may be adjusted and secured at various heights, or left free as desired; whereby the cutting apparatus may be held at any desired height for reaping or be left free for accommodating itself to the undulations of the ground for mowing, substantially as described. 2d. The employment in a harvesting machine of a wheel, provided with a crank and lever for the pur-
134 pose of raising and lowering the outer end of the finger bar to cut high or low substantially as described.

DAVID M. OSBORNE.
WILLIAM A. KIRBY.

7. U S. PATENT OFFICE, *Dec* 7, 1861.

In the margin is "Amendment filed Dec. 6, 1861."

SIR: In the matter of your application for the reissue of patent No. 8,720, a reconsideration of the alleged improvement covered by the third clause of the amended claim, can only be had after a renewal of the oath. The amendment sheet filed 6th inst., is enclosed for this purpose.

Resp'y, &c.,

_____.

Byron Densmore, ass'or to D. M. Osborne & W. A. Kirby,
Care of D. M. Osborne, Auburn, N. Y.

A. M. S., 16.

OFFICE OF D. M. OSBORNE, & CO.,
MANUFACTURERS OF KIRBY'S HARVESTER.
AUBURN, N. Y., *Jan'y 2d*, 1862.

Com. of Patents, Washington:

D'R SIR: I herewith return the amended specifications in the mat-

ter of the application for reissue of Byron Densmore's patent, with a new oath, as suggested in yours of the 7th ultimo.

Very respectfully,

D. M. OSBORNE.

Letter received and filed Jan'y 6, '62.

U. S. PATENT OFFICE, *January 7th*, 1862.

SIR: Your application for the reissue of letters patent, No. 8,720, has been carefully reexamined, and the third clause of the amended claim filed 6th ult., is found to have been distinctly anticipated in the patents granted to C. H. McCormick, Jan'y 31st, 1845, and Oct. 23d, 1847. The remaining clauses of claim, as at present advised, the office will allow. Resp'y, &c.,

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Byron Dinsmore, asso'r to D. M. Osburne & W. A. Kirby,
Care of D. M. Osburne, Auburn, N. Y.

A. M. S., 16.

WASHINGTON, *Jan'y 10th*, 1862.

Hon. D. P. Holloway, Commissioner of Patents:

D'R SIR: In compliance with you official letter of 7th Jan'y, 135 I have to request that the third clause of the claim in the application for the reissue of Byron Densmore's patent may be erased, together with the 3d claim of recital pertaining thereto.

Respectfully,

D. M. OSBORNE, *Att'y.*

Suggested substitute for first and 2d clause of claim.

Amendment filed Jan'y 10th, 1862. A. M. S.

1st. Hanging the driving wheel in a supplementary frame, or its equivalent, which is hinged at one end to the main frame, while its opposite end may be adjusted and secured at various heights, or be left free as desired, whereby the cutting apparatus may be held at any desired height for reaping, or be left free to accommodate itself to the undulations of the ground for mowing, substantially as described.

$\frac{8}{201}$ reissue; $\frac{11}{19}$, page x, && No. 1,262.

BYRON DENSMORE, *Ass'or to D. M. Osborne & W. A. Kirby, of Buffalo, county of State of New York.*

Harvesters rec'd, May 11, 1861; petition, May 11, 1861; affidavit, May 11, 1861; specification, May 11, 1861; 2 drawing, May, 11, 1861; model old patent, cert. dep. 1 cash, $30, May 11, 1861; examined, Chas. G. Page, Jan. 16, 1862; 2 issue, J. L. Hayes, Jan. 17, 1862; 4 patented, Feb. 10, 1852; reissued, Jan. 28, 1862; recorded, vol. 10, page 99, H G^6, 312; spec'n ret'd, May 23, 1861; amend't sheet ret'd, Dec. 7, 1861; letter rejecting 3d claim, Jan'y 7, '62.

Defendant's Exhibit No. 3.

THE U. STATES PATENT OFFICE.

To all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office, of the letters patent granted Nelson Platt, June 12, 1849, No. 6,517.

In testimony whereof, I, D. P. Holloway, Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed, this twelfth day of January, in the year of our Lord one thousand eight hundred and sixty-five, and of the independence of the United
136 States the eighty-ninth.

D. P. HOLLOWAY.

No. 6,517.

THE UNITED STATES OF AMERICA.

To all to whom these letters patent shall come:

Whereas, Nelson Platt, of Ottawa, Illinois, has alleged that he has invented a new and useful improvement in harvesters, which, he states, has not been known or used before his application; has made oath that he is a citizen of the United States; that he does verily believe that he is the original and first inventor or discoverer of the said improvement, and that the same hath not, to the best of his knowledge and belief, been previously known or used; has paid into the Treasury of the United States the sum of thirty dollars, and presented a petition to the Commissioner of Patents, signifying a desire of obtaining an exclusive property in the said improvement, and praying that a patent may be granted for that purpose. These are, therefore, to grant, according to law, to the said Nelson Platt, his heirs, administrators, or assigns, for the term of fourteen years from the twelfth day of June, one thousand eight hundred and forty-nine, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvement, a description whereof is given in the words of the said N. Platt in the schedule hereunto annexed, and is made a part of these presents.

In testimony whereof, I have caused these letters to be made patent, and the seal of the Patent Office has been hereunto affixed.

Given under my hand, at the city of Washington, this twelfth day of June, in the year of our Lord one thousand eight hundred and forty-nine, and of the independence of the United States of America the seventy-third.

[L. S.]

T. EWING,
Secretary of the Interior.

137 Countersigned and sealed with the seal of the Patent Office.

THOMAS EWBANK,
Commissioner of Patents.

[Here follows diagram, marked page 137.]

Schedule.

he schedule referred to in these letters patent, and making part of the same.

'o all to whom these presents shall come:

Be it known that I, Nelson Platt, of Ottawa, in the county of aille, and State of Illinois, have invented certain new and useful provements in machines for cutting and raking grain or grass by imal power, of which the following is a full and exact description, erence being had to the annexed drawings of the same, making rt of this specification, in which figure 1 is a perspective view of ie apparatus, showing its several parts in connection, and ready r operation. Fig. 2 is a top view. Fig. 3 is a side elevation, a portion of the frame being removed, to expose the rake and sickle. ig. 4 is a sectional view taken through the line x x of figure 2. '. 5 is a view of the stop and catches, by which the auxiliary rake turned down to take the sheaf of grain from the first or principal ake detached from the machine. Fig. 6 is a view of a section of e chain and cutters in various positions. The same letters indicate ie same parts in all the figures. The machine, as represented in accompanying drawings, is mounted upon three wheels, the hinnost of which (A) is hung upon a pivot or vertical shaft, (a,) ch is turned by the attendant, to govern the course of the hine when in motion, by means of a steering wheel (b) secured on its upper end. The other or front wheels (B) are secured in the usual manner upon the opposite ends of an axle, (C,) upon 38 which the frame (D) is suspended, together with *with* its platform, the cutters, (E,) reel, (F,) first rake, (G,) and second ke, (H.) with the mechanism required to operate them severally. e frame (D) is raised and lowered upon the axle C, which acts as ulcrum for the purpose of elevating and depressing the cutters dapt them to cutting off the grain at different heights from the ind by means of the segment racks (c) and pinions, (d,) the former ched to the back end of the frame, (D,) the latter to the beam (J.) e pinions (d) are turned by the quadrant lever or sector, (d^1,) and e latter is moved by a rope or chain, (f,) which is drawn up and down by the windlass (I,) to which it is attached. Windlass is ided with a parol or stop to hold it in any position it may be essary to place it in, in the adjustment of the cutters, and for the pose of raising the cutters up to be out of the way, and pass over ructions with which it might otherwise come into contact in ing along the road from one place to another. The horses, or r animals employed to propel this machine, are harnessed to a pple tree (g) attached to the beam, (J,) on either side of which travel. The beam (J) also connects the wheels A and B B, and ports the steering apparatus, and likewise supports the man who uides the machine and drives the team. The swing frame (D) consists of two principal beams (D^1 D^1) suspended to the axle (C) by ms (h h) projecting from their uper side, and braced, so as to

give them the requisite firmness and strength. Upon the rear e
of these beams the studs (i i) are erected, to which the racks (c
are secured. Upon the front end of these beams (D^1 D^1) the doub
platform K is placed, in which the endless chain cutter E an
139 the first or principal rake are secured and operate; and, also,
the side platform (L) upon which the sheaf is conveyed by
the second rake. Upon these platforms are placed the frame for
supporting the reel F, and the wheels and shafts which operate it;
also, the frame for supporting the wheels, shafts, &c., which operate
the rakes, with the guards or petitions (j) to prevent the grain both
from falling off the platform, and, also, from getting entangled in the
machinery. The object for which I use the reel (F) is the same as
that for which it is used by others, namely, pressing the grain
against the cutters; and, as it requires to be elevated and set back for
long, and depressed and moved forward for short grain, in order that
they may be respectively cut to the best advantage (c^1.) I have
made provision for varying its adjustment to any required position
by making slots (b) in the horizontal bars, (l,) to which the bearings
in which the axis of the reel rests are secured; and, also, by making
slots (m) in the posts (n) for the bolts to pass through, which sup
ports the horizontal bars. The horizontal shaft (o^2) upon which the
wheels are mounted, which turn the reel, slides through the hollow
axis of the wheel (14) by which it is driven, and has a longitudinal
groove in its side, into which a stud in the eye of the wheel projects
to drive it; the object of this sliding connection of the shaft (o) and
wheel (14) is to prevent derangement of the driving gear when the
reel is moved in and out for the purpose of adjustment. The vanes
of the reel are placed obliquely to its axis, for the purpose of bring
ing the grain more gradually and with greater regularity into
140 contact with the cutters, and, also, to press it obliquely
against them in a direction contrary to their motion, and
parallel to the inclination of the indentation formed on their edge,
which is found in practice to greatly facilitate the cutting. The
grain has a tendency to slip past the hindermost end of the vanes in
consequence of their inclination, and thus escape being cut. To
prevent the loss of grain and defect in the performance of the
machine thus occasioned, I place a wedge or hook (F) upon the end
of each vane in the plane of its motion, which prevents the grain
from slipping over it. The cutter or sickle (E) consists of a series
of short sections of uniform shape, each corresponding in length
with, and secured to, the links of an endless chain (N) by means of
screw, bolts, or otherwise. By this arrangement each cutter can
very readily be removed, to be either sharpened or repaired, or
replaced by another; and, as the cutters form no part of the chain,
they are not liable to be broken or deranged by the force which is
required to overcome the inertia and friction of the chain and of
themselves, as that is borne by the chain by which they are carried,
so that they have to sustain only the force required to make the cut.
The chain N and sectional cutter E are respectively formed as repre-
sented in figure 6, each section being narrowest at the end which

goes forward, in order that the grain or grass may be the more readily seized and cut off. The edge of the cutters are serrated in the manner of a sickle, and one end is sharpened, in order that it may cut off any straw or other obstruction intervening be-
141 tween it and the plane surface of the adjacent end of the next section. This point I deem of much importance, because it renders the cutters capable of freeing themselves of straw and grass which otherwise would soon choke and cause them to break. The chain, with its attached cutters, is stretched round a pulley (o^1) and a cog wheel, (o,) fig. 1, the teeth of which take into the interstices between the links; so that when the cog wheel revolves it carries the chain with it at its own velocity. The wheel and pulley are secured upon verticle axis, which turn in suitable bearings attached to the platform or frame. A groove is formed between the upper and under surface of the platform for the chain to run in, to keep it in the proper position and prevent its yielding to the pressure exerted by the grass or grain against the cutters. I contemplate making the edge of the sectional cutters either smooth or serrated, and, also, so forming them, that when the chain is in a straight line they will either form a straight, or a more or less indented edge, as the particular circumstances of the case may render it advisable. It may, also, be found advisable to make the sections at some distance apart instead of making them contiguous. The platform K is double, the upper portion being sloted for the teeth (q) of the rake to pass through the head of the rake moving between the top and the bottom.

The rake head (O) is placed in a sliding stock (Q) which runs backward and forward on a guide rod, (Q^1,) the end of the rake head within the stock has a pinion (r,) or a segment of one, secured upon it
142 into which a quadrant rack (r^1) takes, which is attached to the end of a lever (r^{11}) which turns on a fulcrum on the sliding stock (Q,) the lever and fulcrum being so arranged that the chains (S) which draw the stock and rake backwards and forwards, will turn the pinion (t) each time the motion is reversed far enough to turn the rake teeth (q) through an angle of 90°, so as to change them from a vertical to a horizontal position, and visa versa, in order to stand upright to sweep the grain from the first to the second platform, and then again assume a horizontal position to pass beneath the platform, to be in position again to rake the cut grain from it. These alternations of the first rake are produced by the two chains (S^1,) one end of each of which is attached to the lever (r^{11},) and the other, after being passed over the pulleys (S^{11},) is secured to the periphery of the flanged drum (S,) which is alternated by a rack (S^3) which takes into a pinion (S^4) upon its axis. The rack (S^3) is alternated by a pitman (S^5) which is moved by a crank pin to which it is secured upon the face of the driving wheel (5.) The second rake (H) is attached by one end of its head to a cogged quadram (Γ) in such a manner that it may be turned upon its own axis, at the same time that it is swung through the arc of vibration of the quadrant, to carry the grain received from the first rake over the second platform, and deposit it

behind the latter on the ground. In order that the ends of the teeth may be carried above and placed behind the grain or grass delivered by the first rake upon the 2nd platform, they are turned into a horizontal position, when moving forward, by a weighted (T^{11}) in
143 which position they remain until brought over and behind the grain to be removed by them. The bent arms (t t) upon the inner end of the head, coming against and sliding upon an irregular fixed catch or stop, (in figs. 2, 35,) turn the teeth down again into a vertical position, when the quadrant is reversed in its motion, engaging an arm (T^{111}) which holds up the weighted lever and keeps the rake verticle until it has discharged the grain, when the quadrant (T) being reversed the rake head comes in contact with the spring, (t^1) which offers sufficient resistance to disengage the arm (T^{1111}) from the catch (t t^{11},) when the weighted lever immediately turns up the teeth again into the horizontal position to prepare them for a repetition of the operation just described. The quadrant T gears into and is alternated by the rack U, which is moved by the pitman U^1, the latter receiving its motion from the wheel (6,) to which it is attached by a wrist pin or otherwise. Motion is communicated to the cutter, reel, and rake from one of the wheels (B,) which has a cog wheel (1) secured to it in any suitable manner, which gears into a pinion (Q) mounted upon the principle driving shaft (v,) upon which are placed three pinions (3, 4, 5,) of unequal sizes and having one hollow axis, which is common to all, and slides upon the shaft (v,) so that any one of the pinions may be placed into gear with that one of the wheel, 3, 4, 5, upon the second driving shaft, with which it matches. The front wheel (3) upon the second driving shaft gears into and drives the wheel (6) and the third driving shaft upon which it is mounted, upon the end of this last shaft is placed a crank which operates the pitman U^1 that turns the quadrant T that turns second rake, which crank is so placed as to bring this rake into the proper posi-
144 tion to receive the grain brought forward by the first rake, immediately after the same has been deposited by it upon the second platform. Upon the front end of the first driving shaft (v) a bevil wheel (7) is placed which takes into a similar wheel (8) and drives the upright shaft (8^1) upon which it is mounted, upon the upper end of the last shaft another bevil wheel (9) is placed which gears into and drives a like wheel (10,) which drives the shaft (10^1) upon which it is mounted together with the two wheels (11 & 12.) One of the wheels (11) gears into the wheel (13) which is secured to and drives the shaft (13^1,) upon the opposite end of which is a bevil wheel (15) which takes into and drives the wheel (10,) which is mounted upon and drives the vertical shaft (11) upon which is the driving wheel (o) of the endless chain to which the cutters are attached. The other wheel 12 mounted upon the shaft (10^1) takes into the wheel 14 whose axis is hollow and is mounted upon the shaft (o^2) which it drives, the other end of the shaft carrying the wheel 18, which gears into and drives the wheel 19 mounted upon the end of the axis of the reel and turns the same. The cone of pinions 3^1, 4^1, 5^1,) and wheels (3, 4, 5,) are for the purpose of governing the fre-

quency of the alternations of the rakes, so as to make the sheaves of a size corresponding to the growth of the grain. The train of wheels above described, as well as the other devises employed to give to the cutter, reel, and rakes their requisite movements, may be constructed and arranged as represented, and in various other ways well known to the machinist, and which do not therefore require a particular description. These motions may also be produce by belts or chains and pulleys, instead of gear, if the same should be thought
145 preferable by the constructor. The several parts of the apparatus may be made of such materials as it is deemed best by the constructor to employ. The operation is analagous to that of other harvesting machines. The horses being attached to the beam J, and the several parts properly adjusted, the conductor mounts the platform M and starting the team advances the machine, guiding it by means of the steering wheel (b,) which is capable of turning the wheel A so as to turn the machine entirely around in a very short space. The reel presses the standing grain back against the cutters which cut it off letting it fall upon the platform, whence it is taken by the rakes which remove it with sufficient frequency to render each lot taken off, of a suitable quantity for a shief. What I claim as my invention and desire to secure by letters patent, is: The combination of a series of removable cutters, with the links of endless revolving chain which carries them successively into contact with the grass or grain to be cut, substantially as herein described, whether the cutters be contiguous or placed at intervals upon the chain. I also claim making one end of each cutter sharp in order that by pressing against the adjacent end of the next cutter, straw, grass or other intervening obstructions may be cut in two and allowed to pass out, the cutters thus freeing themselves from obstructions which might otherwise choke or break them. I also claim placing the bundles or sheaves of grain at right angles to the path of the machine, by means of a second rake (H) combined with the first, substantially as herein set forth. I also claim moving or turning the first rake by
146 cords, chains or belts, arranged and operated as described, or in any other substantially similar manner. I also claim vibrating the second rake (H) and turning its teeth, as herein set forth, whether the devices employed to effect these movements be such as described or others equivalent thereto. I also claim changing the frequency of the alternations of the rakes by means of the cones of wheels 3, 4, 5, and pinions 3^1, 4^1, 5^1, or other equivalent device, for the purpose of varying the size of the sheaves as herein set forth.

In testimony whereof, I have hereunto set my hand.

NELSON PLATT.

Witnesses:

P. H. WATSON.

S. W. WOOD.

Defendants' Exhibit No. 4.

THE UNITED STATES PATENT OFFICE.

To all persons to whom these presents shall come, greeting:

This is to certify, that the annexed is a true copy from the records of this office of the letters patent granted Alfred Churchill, March 16th, 1841. No. 2,007.

In testimony whereof, I, D. P. Holloway, Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed, this twelfth day of January, in the year of our Lord one thousand eight hundred and sixty-five, and of the independence of the United States the eighty-ninth.

[SEAL] D. P. HOLLOWAY.

No. 2,007. THE UNITED STATES OF AMERICA.

To all to whom these letters patent shall come:

Whereas, Alfred Churchill, Geneva, Illinois, has alledged that he has invented a new and useful improvement in the mode of harvesting grain which he states has not been known or used before his application; has mad oath that he is a citizen of the United States, that he does verily believe that he is the original and first
147 inventor or discoverer of the said improvement, and that the same hath not, to the best of his knowledge and belief, been previously known or used; has paid into the treasury of the United States the sum of thirty dollars, and presented a petition to the Commissioner of Patents, signifying a desire of obtaining an exclusive property in the said improvement and praying that a patent may be granted for that purpose. These are therefore to grant, according to law, to the said Alfred Churchill, his heirs, administrators, or assigns, for the term of fourteen years, from the sixteenth day of March, one thousand eight hundred and forty-one, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvement, a description whereof is given in the words of the said Alfred Churchill in the schedule hereunto annexed, and is made part of these presents.

In testimony whereof, I have caused these letters to be made patent, and the seal of the Patent Office has been hereunto affixed. Given under my hand, at the city of Washington, this sixteenth day of March, in the year of our Lord one thousand eight hundred and forty-one, and of the independence of the United States of America the sixty-fifth.

[SEAL.] DANIEL WEBSTER,
Secretary of State.

Countersigned and sealed with the seal of the Patent Office.
HENRY L. ELLSWORTH.
Commissioner of Patents.

[Here follows diagram mark page 147.]

To all whom it may concern:

Be it known that I, Alfred Churchill, of Geneva, in the county of Kane, and State of Illinois, have invented a new and improved mode of harvesting, and I do hereby declare that the following is a full and exact description:

148 The nature of my invention consists of threshing and saving all kinds of small grain when standing in the field, without cutting the straw. To enable others skilled in the art to make and use my invention, I will proceed to describe a combination of machinery to perform the operation. I construct the threshing part of my machine similar to the threshing part of a common threshing machine, and get the power from one of the hind wheels of the carriage C F I, upon the which the machine is placed. The cylinder d F 2, which threshes the grain, is placed at one side of the front end of the frame or grain box a a F 1 of the machine, so as to allow the team that moves the machine to travel by the side of the grain upon which the thresher is to operate. The forward wheels, c c F 1, are of narrow track, and a few feet in front of the opposite corner of the box to which the threshing cylinder is attached, and connected to the hind wheels by coupling cars m m 1, on which the front end of the grain box rests. I attach also to the machine what I call a "gatherer;" its place of action is in front of the cylinder. It serves to gather the grain to the thresher, raises the cap which covers the cylinder and grain while threshing. One kind of gatherer may be constructed by erecting at each end of the cylinder d f 2, and projecting a sufficient distance forward, and of a sufficient height, sides or supports b F 2, on the inner sides of which are fixed to each four small wheels c c c c^3, or pullies at proper distances; two at or near the top, and two near the bottom of each support or side-piece b. The two at
149 the top, nearest the cylinder d, have a shaft or rod r 1 passing through them, to which they are attached, which shaft and wheels are made to revolve by the power obtained from one of the hind wheels of the carriage. A chain-belt, J^2, is put round the four wheels thus arranged on each side; to each of these chain belts is attached the ends of rod h h h^2, which extend from one chain to the other at such distances from each other that when one rod is at the cylinder d^2, the next above it shall be at the upper wheel, so that while the rod a is gathering the grain to the cylinder b F 7, the rod c preceding may raise the cap e to a sufficient height for the grain d to pass under and be droped as the rod c passes forward over the upper pullies f F 4. Another form may be constructed by attaching the cap c^4 to proper machinery to raise it, move it forward, let it decend into the grain, and then draw it back to the thresher d m 4, bending the straw N 4 over the edge of the concave m^4, down to the cylinder d 4, and covering it while the grain N 4 is threshed out; but the modes of gathering are so numerous, and your petitioner believing it to be unnecessary, will not attempt to describe all of them. The letters and numbers introduced must not be understood to confine this form of gatherer to the plan in the drawing as the only

mode of making the motion; (F, 2.) The cap c of the cylinder d may be made of any convenient form to cover the cylinder d while the grain is threshed, and at the same time so that it will assist to bend the straw N 2 over the edge of the concave down to the cylinder d, that the grain may be threshed out, and at the ends fitted to
150 grove or guides f^2, attached to the sides b^2 or supports of the gatherer, and hooks g 2 may be attached to the front of cap e 2, so that the gathering rod h may raise it and drop it at the proper time, which is when the succeeding rod has brought the grain N 2 to the thresher i & d. (F 2.) The concave or apron of the thresher is placed as usual under the cylinder, and raised about one-third of the circle up in front, and projects sufficiently forward and under the gatherer, as at i^2, to enable the gathering rods h 2 to break the grain N 2 down upon the cylinder; under and attached to the lower edge of the sides or supports of the gatherer are dividing bars l 2 of sufficient width to divide the grain, so that the gatherer may receive it, which projects forward of the sides and terminate in a point; (F. 5.) The carriage wheel o 5, in the rear of the cylinder or thresher, is placed in a recess of the grain box a, so as to track where the grain is harvested; (F. 6.) The other hind wheel of the carriage is placed nearly in a direct line of the draught of the team from which I prefer to take the power to propell the other machinery. The forward end of the grain box, thresher, gatherer, &c., should be so arranged that it may be raised and lowered to suit the height of the grain. All of which is represented in the accompanying drawings, of which fig. 1 is a perspective view. The parts by letters are a a a a a a, is a box for receiving the grain; b b, sides and supports of the gatherer; c c c, carriage wheels; d d d d, wheels for propelling the threshing cylinder and gatherer, connected by chain belts, or cog gearing may
151 be used; c, wheel and rod to move the gatherer; f, wheel and rod to move the threshing cylinder; g g g g, wheels which move, and on which the gathering chains move; h, cap to cylinder; i i i, gathering rods; J, concave or apron of thresher; k, hook by which the gathering rods raise the cap; l l, bars to divide the grain; m m, connecting bars; n n n, standards and levers to raise and lower the forward end of the machine; P, guide to the cap; q, gathering chain; r, rod passing through gathering pulleys. Fig. 2 is a sectional view, the parts by the letters are—a, side of the box; b, sides and supports of gatherer; c c c c, wheels of the gatherer; d, threshing cylinder; e, cap of cylinder; f, guide to the cap; g, hooks by which the cap is raised; h h h, gathering rods; i, concave or apron; J, gathering chain; l, dividing bars; N, grain or straw bent to thresher. Fig. 4 is a sectional view of another gatherer: a, side of box; b, side and support of gatherer; c, bar by which gatherer is moved; d, cylinder; e, gatherer; f, movable guide in the groves, of which a pin attached to the gatherer slides; N, grain bent to thresher; g, eccentric wheels attached to the crank-shaft h, which moves the points i i up and down, which are attached to the lever j, which is connected by k to the movable guide f; l l, bars to confine the end of box; the back and forward motion is made by the crank h. Fig. 5 is a ground plot

of the machine: a, grain box; b b, sides and support of gatherer; c c c c, wheels of gathering chains; d, cap; e e, hooks; f f, guides; g g, dividing bars; h, rod; and i, wheel to move gatherer; J, wheel
152 and rod to move cylinder; k k k, wheels to propel cylinder and gatherer; l l, connecting bars; m, support to machinery; o o, carriage wheels. Fig. 6 is a ground plot of carriage: at a a the axle is rounded to fit clasps which confine the box and carriage together. On the carriage wheel that propels the machinery may be affixed spikes or teeth or other thing to prevent it from sliding. The back part of the grain box may be hung on hinges, to be let down with proper side pieces attached to unload conveniently. Another modification of form and action of the cap, so as to make of it the "cap gatherer" may be constructed by attaching to the e, fig. 4, an arm c, which is connected with, and moved by the crank h, which crank, when in motion, gives the cap a forward and backward motion; to the shaft of the crank o o, fig. 7, may be attached eccentric wheels g, fig. ° 4 & 8, which, when in motion, raises and lowers the guides f of the cap by means of the lever j and points i i, which are connected with the lever J. The guides of the cap f are made so as receive the points or pivots n n 9 in a grove or slot in which the points move when the cap is in motion. The eccentric wheels should be made of such form that the cap may be raised while it is moved forward by the crank, and decend nearly in a perpendicular line when the crank has drove the cap to its greatest extent forward, and let the cap remain in that position until it is drawn back by the crank to the thresher m d 4 & 8. The crank shaft o o 9 may
153 pass through the grain box, and be connected with the other machinery with such convenient gearing as will give it the requisite motion, or any other machinery may be used that will give the cap the requisite motion, oscillating or revolving to constitute it a gatherer. Fig. 8 is the same as f 4, with the cap e raised showing the guide f. Fig. 9 represents the top of the cap e as attached to the arm c, in connection with the crank h and eccentric wheels g g, connected with the crank shaft o o and the points or pivots n n, to guide the cap and keep it in its proper place of action. A groove may be made in the end of the front piece of the cap as at f 13, and the guide and angular rib or tongue piece attached to the sides or supporters of gatherer as represented at f 13 & 15; also see f, fig. 7; or by attaching to the sides or supporters of gatherer a piece of firm wood or metal, in which is formed a groove, as represented by f 10, 11, 12, and the ends of the cap fitted to said grooves at f 14. The hooks must be made of metal of sufficient strength to raise the weight of the cap by a quick motion, and attached to the cap by bolts and screws or rivets, the upper part is turned at a right angle with the part attached to the cap. See f 16, 17, and 18. I should also say that, for the purpose of shortening the length of the gathering chain, the hooks may be attached to the cap lower down than represented f 16; for the place of attaching the hooks in that respect depends entirely upon the perpendicular length of gather-
154 ing chain, and the distance to which the cap is to be raised;

f 34 represents a part of gathering chains, in connection with the gathering rods. The rods are connected to the chains by a knob made of metal, of the length and width of one of the blank links, to which it is attached by screws or rivets at each end, through the centre; in the contrary direction of the screws is made a hole to receive the rod, where it should be properly confined by a pin through the knob or screw on the end; knob represented by f 35. To construct the cap as used with the revolving rods, the front is a plain surface, with hooks and groves, as described, the perpendicular height from one and a half to two feet, less or more, according to the size of the cylinder. That part which covers the part of the cylinder should be of sufficient width to cover the whole of the space from front of the cap to the grain box, and may be made either plain or concave to fit the shape of the cylinder, or the top part of the gatherer may be made stationary, by confining the ends to the sides or supports of gatherer, in which case it will be necessary to place it sufficiently high to allow of the grain passing under it when the grain is gathered to the cylinder, which will be about two feet. The cap, after being raised by means of the gathering rods and the hooks attached as the rod moves forward over the pulleys, leaves the hooks, and the cap descends by its own gravitation, by which, and its accelerated motion, it strikes the grain with sufficient momentum to break the grain down upon the cylinder after being bent over the edge of the concave by the gathering rods. It is necessary
155 that the front part of the cap should be made of some heavy material, as wood and iron, or iron alone. To further elucidate and describe the modified form and action of the cap: Believing that the motion caused by the crank has been sufficiently explained, I will only refer to the motion and effect of the eccentric wheels; the size and eccentricity are not material, as the motion caused by them can be varied by moving the fulcrum a f 31 nearer to or farther from e; and it may also be varied to give the cap a greater or less elevation to suit the state of the grain i i, if some should be short and some long at the same place, rendering it necessary to strike deeper into the grain. The centre of motion, and also the crank shaft is d f 31; the eccentric wheel c. dotted line, when the side of the wheel, that extends furthest from the centre of motion descends, it presses upon c, and carries it to descend as represented; continue the motion, and the wheel presses upon b, and drives it up, these points being connected with the lever e f by the circular bars g g, and the lever being confined by the fulcrum a; when e rises f must necessarily descend, and vice versa, the end of the lever f being connected by a rod k F 8 to a guide f F 8, which guide is confined at the opposite end by a bolt o F 8; the ends of the lever and guide thus connected necessarily have equal motion. The guide may *may* be made of either hard wood or metal, or a combination of both, of sufficient width and thickness to give it
156 strength, and at the same time to admit of a grove or slot being cut, in the centre of the width, nearly from end to end; the length of the grove is determined by the length of the crank,

and the guide must be so much longer than the slot as is necessary to admit of its being properly connected as described above. The length of the crank is determined by the motion that is given to it, as the quicker the motion is, the shorter should be the gathers or strokes of the gatherer or cap, and a slow motion requires long gatherers; and all should be so arranged that the grain may be gathered as fast as the machines comes to it when in motion, and as the motion is derived from one of the wheels of the carriage, the team or moving power, moving fast or slow, will make no difference in this arrangement. The points that move in the slot of the guide, should be made of metal; that part which is inserted in the slot, is of elliptic form as at f 19: that part flat, which is attached to the cap with the bolt holes at 20; the connection with the cap is by the crew bolts near the back part of the top of cap, as at y f 30 and 33. The form of the eccentric wheels is nearly that of a heart; the circle that forms the side, that is in front, when the point is down, being of greater diameter than the opposite, as at f 36; f 10, grove guide to cap; f 11, same, with end view of cap; 12, end view of groove guide; 13, front of cap used with rib guide; 14, same, with
157 groove guide; 15, rib guide as attached to side of gatherer; 16, end view of cap, with a hook attached; 17 18, different views of hook; f 19, end view of point, in modified form and action of cap; 20, extended view; 30, end view of cap and section of arm; 31 f e, section of lever; a, fulcrum, b cpoints; c, dotted circle eccentric wheel; g g, circular bars to connect the points b and e d, centre of motion and crank shaft h h; fixtures to keep the points in their proper place should enclose the lower part of the bar so that it may move up and down through it; 32, guide representing slot; 33, section of cap, under side, showing the connection of the points or pivot; 37, side view of bar to which the points, used with eccentric wheel are connected, and end view of lever showing the connection; 34 and 35 have been referred to; 36, the *the* shape of eccentric wheel; a, section of arm; b, crank; d d, points; c c, wheel, all in the position that they should stand when the cap is raised, and at its greatest extent forward. Fig. 38 is a front view of the revolving-rod gatherer; the parts by the letters—a a section of grain box; b b, sides or supports of the gatherer; g g g g, pullies for the chain; i i i, gathering rods; J, front edge of concave; *k k* hooks; r, shaft of the driving pullies; z, shaft of cylinder; l l, dividing bars;
158 y y, chains. Fig. 39—a a a, section of grain box; b, cap; c, cylinder; d, arm which moves the cap by means of a crank; f f, levers that raise the guides; e e, guides; g g, sides of gatherers; h, front edge of concave; i i, dividing bars; J J, rods connecting lever and guides; *k*, shaft of cylinder; this figure represents the front view of the modified form and action of the cap, with the cap raised as in fig. 8. In the construction of the revolving-rod gatherer, the construction of the small wheels or pullies upon which the chains act, and which act upon the chains, may be raised to suit the chain used, and also the mode of confining the ends of the rods may be varied to suit the form of the chain, as the form of the chain is

immaterial, provided the other machinery is adapted to it. In the modified form and action of the cap, two guides are required, one at each end of the cap, also two levers to move side guides, and two eccentric wheels, one arm in the centre of the cap at right angles with the top of the cap, as represented by fig. 9; figs. 4 and 8 represent the guide, lever, eccentric wheel, points, and their con-
159 nection with each other. The extended side view of the arm, and end view of the cap, and by the different position in which the machinery is placed, it is intended to represent its action. As stated before, two sets of the, guide, lever, eccentric wheel, points, and their connections, are required, one at each end of the cap; the wheels each side of the crank. What I claim as my invention, and desire to secure by letters patent is the method herein described of gathering and threshing grain at the same time, by means of the revolving rods, or oscillating or revolving cap, constituting the gathering in combination with the thresher and concave; the whole being constructed and operating substantially in the manner set forth.

A. CHURCHILL.

Witnesses :
SAMUEL PLATT.
NEHEMIAH PLATT.

160 *Defendant's Exhibit, No. 5.*

UNITED STATES PATENT OFFICE.

To all persons to whom these presents shall come greeting :

This is to certify that the annexed is a true copy from the files of this office of the specification and drawing, in the matter of the rejected application of E. P. Cavett, rejected in 1852.

In testimony whereof, I, D. P. Holloway, Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this sixteenth day of January, in the year of our Lord, one thousand eight hundred and sixty-five, and of the independence of the United States the eighty-ninth.

[SEAL.] D. P. HOLLOWAY.

161 [Here follows diagram, marked page 161.

To all whom it may concern :

Be it known that I, Edwin P. Covett, of the city and county of Philadelphia, in the State of Pennsylvania, have invented certain new and usefull improvements in reaping machines, and I do hereby declare that the following is a full, clear, and exact description of the same; reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 is a plan.

Figure 2 is an end view next to the standing grain.

Figure 3 is a front elevation of the front cutters, and their immediate parts.

The same letter of reference denote corresponding parts throughout the several figures.

Description.

A A are main running and propelling wheels attached to a shaft which has its bearings in cross ties of the permanent frame *a*. ..e outside of one of these wheels has a pully on its face, which, by belt *b*, drives a pully on the shaft *c*, giving motion, by level gear *d e*, .. a crank f, that, by hinged connecting rod g, drives the reciproca-.ng saw or serrated cutter h; the shaft c and gear driving the cut-.r h are hung in a rocking frame j, joined by hinges i i to the back .. the permanent frame, and supported in the front by a small run-.g wheel C, that, in traveling over any vendulation in the surface the ground, causes the frame j to rise and fall with it, the several .tters, (of which h is one,) for mowing the grain or grass. he machine is drawn forwards by the cattle in direction of the rrow 1, figure 1, through any suitable attachment of draught bar or ngue; t are the fingers for gathering the grain or grass in between em or against the cutters as the machine travels forward; these gers are formed of thin plate on their top surface, so as to form cutting edges at their back; they are of the usual spear shape 32 in front, but taper to a point at their back, thereby forming (each one) a tooth *m*, whose point projects to or over (nearly) .e root of the teeth in the reciprocating cutter h, which work in .der the teeth, constitute what may be termed the top-stationary .tter; n, are teeth forming a lower stationary cutter, they point in a .verse direction to the teeth m, and are situated intermediately of .e latter; the teeth of the cutter h, reciprocating close over the .eth *m*; the edges of the several teeth in the three cutters are made .rp by leveling them in suitable directions, and the fingers l are at .ch a distance apart from one another and the teeth m, also the .wer teeth n, of such widths as that spaces are formed for reception f the grain or grass in between the said teeth m and n; the teeth of he reciprocating cutter h moving alternately, each stroke the grain r grass held between the two adjoining sides or edges of the teeth and n; thus, during the movement of the cutter h, presenting .ree cutting edges to the grain or grass, viz: the two stationary rrangements of teeth, and the one intermediate moving arrange-ent, whereby, should the edges of the teeth in either cutter fail, the .eth of the others remaining sharp, the grain or grass will be effec-vely mown, the upper and lower teeth serving to prevent the grain r grass from bending or flying off from the teeth of the mowing cut-.r. The fingers l and lower cutter of teeth n are attached to or .rom part of a horizontal frame D, which raises the cutters to their proper height from the ground by means of a small running wheel E at the one end, and by jointed connection, through a hinge o, to a bracket from the rocking frame j; a further rocking attachment being

provided through means of a supporting and brace rod E^e, secured to the under side of the fingers l or their frame, or hinged at the other end to an extension of the permanent frame *a* at the back.

The reciprocating cutter h working (through means of slots
163 in it, and projecting stationary pins fitting through the slots) in the directions before referred to, and as indicated by arrows 2 2, fig. 1, is operated by the connecting rod g, having its point or hinge at p; thus, when the machine is traveling over undulating ground, the frame j, in rising or falling, will give play to the several cutters named, so as to cause them to ride over, with freedom, the uneven surface of the ground, and whatever the irregularities in the ground surface, to cut at any equal height from the earth, and this accommodating rising and falling action is produced without necessarily effecting, in a similar manner, the entire machine, which, from its weight, when traveling over soft ground, is apt neither to rise or fall sufficiently with the specified inequalities of the surface; F is the receving table on which the grain falls in mowing; it is hooked on the lower cutter of teeth n, or frame carrying the same, and rests on rod E^e. This table is removed when the machine is used simply for cutting grass, which the arrangement of cutters described serves to perform, however irregular or undulating the field or ground surface.

What I claim as my invention and desire to secure by letters patent, is: 1st. The combination and arrangement specified of the fixed top cutter, formed by the teeth m, of the fingers l, intermediate, serrated, reciprocating cutter h, and stationary under cutter, having teeth n, the latter teeth being situated intermediately of the teeth of the cutter h, as shown and set forth. 2nd. Hanging the reciprocating cutter h, and the upper and lower stationary cutters connected with it, to the permanent frame *a* by a hinge-rocking frame j, provided with a bracket having a hinge or joint *o*, for the purpose of admitting for an easy play to the mowing cutter or cutters, when travelling over undulating or uneven ground, so as to insure the cut being mad at any equal height or distance from the earth.

In testimony whereof, I have hereunto signed my name before two subscribing witnesses.

EDWIN P. CAVETT.

Witnesses:
ALF'D GREGORY.
A. E. H. JOHNSON.

164 No. 6.—Reissue, No. 985.

UNITED STATES OF AMERICA.

To all to whom these letters patent shall come:

Whereas, W. N. Whiteley, jr., of Springfield, Ohio, assignee of Thomas S. Steadman, of Murray, New York, has alleged that said Thomas S. Steadman did invent a new and useful improvemant in clover and grass-seed harvesters, (for which letters patent were

issued to said Steadman, dated May 23d, 1854, which letters having been surrendered by said assignee, the same have been cancelled, and separate letters ordered to issue to him on three amended specifications,) which, he stated, had not been known or used before his application; had made oath that he was a citizen of the United States; that he did verily believe that he was the original and first inventor or discoverer of said improvement, and that the same had not, to the best of his knowledge and belief, been previously known or used, said assignee having paid into the Treasury of the United States the sum of fifteen dollars, and presented a petition to the Commissioner of Patents signifying a desire of obtaining an exclusive property in the said improvement, and praying that a patent may be granted for that purpose.

These are, therefore, to grant, according to law, to the said W. N. Whitely, jr., his heirs, administrators, or assigns, for the term of fourteen years, from the twenty-third of May, one thousand eight hundred and fifty-four, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvement, a description whereof is given in the words of the said W. N. Whitely, jr., in the schedule hereunto annexed, and is made a part of these presents.

In testimony whereof, I have caused these letters to be made patent, and the seal of the Patent Office has been hereunto affixed.

165 Given under my hand, at the city of Washington, this nineteenth day of June, in the year of our Lord one thousand eight hundred and sixty, and of the independence of the United States of America the eighty-fourth.

JACOB THOMPSON,
Secretary of the Interior.

[SEAL.]

Countersigned and sealed with the seal of the Patent Office.

PHILIP F. THOMAS,
Commissioner of Patents.

[Here follows diagram, marked page 165.]

The schedule referred to in these letters patent, and making part of the same.

To all whom it may concern:

Be it known, that Thomas S. Steadman, of Murray, in the county of Orleans, and State of New York, invented certain new and useful improvements in clover and grass-seed harvesters, of which the following is a full, clear, and exact description, reference being had to the annexed drawings which make part of this specification.

This invention relates to that kind of machine in which the height of the cutting apparatus (from the ground) is varied by exchanging the relative positions of the main frame and master-wheel axle, (or shaft,) and consists in connecting the main frame or box of the

machine with the master-wheel axle by means of an arm or supplementary frame, on which the master-wheel axles is formed or fastened, and which arm is arranged with the main frame or box and its opinion shaft in such a manner that said main frame may be raised and lowered, and held at different heights relatively to the master-wheel axle, and so that the said main frame and supplementary frame shall both vibrate relatively to each other around a common centre, which is coincident with the axis of the pinion shaft. To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operations by
166 referring to letters to the accompanying drawing, which forms part of this specification, and which illustrates a machine embracing my improvement or invention:

Figure 1 represents a side elevation of the machine.

Figure 2 represents a front elevation.

Figure 3 represents a cross section at the line x x of figure 1.

Figure 4 represents a perspective view of the arm of supplementary frame.

Figure 5 represents a perspective view of the guide plate of the supplementary frame.

Figure 6 represents, in detail, view of the supplementary frame and gears.

Figure 7 shows a cross section at y y of figure 4, and

Figure 8 is a cross section at the line z z of figure 5.

Similar letters represent the same part in the different views.

(A) represents the main frame or box of the machine, which is furnished near the centre of its rear end with a supporting caster wheel, (E,) and near its forward end the wheels (B) and (B^2) are placed, as shown in the drawing, all of which serves to support the main frame or box (A) when the forward end of the machine is not running on the ground, and one of which (B) is the master or main driving wheel of the machine; (b) is its axle or shaft; (c) is the pinion shaft; (J) is the arm or supplementary frame on which the master wheels and gears are hung, and which is arranged on the end of the pinion shaft (c.)

The wheel (B^2) is hung on a plate (J^2) similar to arm (J,) and which also moves around the end of the shaft (c.) The arms (J) and (J^2) are guided at their movable ends by guide plates (r) fastened to the sides of the box (A,) and are retained in any desired relative position of the box (A) by means of levers (c) (c^2.) (K) is the finger bar, and (i) are the fingers, and (x) are the cutters, the bar (r) of which is operated by the cranks (c^2) of the pinion shaft, through the medium of the bars (a.) The levers (c) and (c^2) not only hold the
167 frame (A) at any desired elevation, relatively to the axle of the side wheel, but also shift the frame in relation to said wheel's axles. (F) is the rake, and (u) the shafts which the team is engaged with the apparatus. The levers (C) and (C^2) are operated by cords (o) (o^2,) which pass over pulleys (H) (H) on the outer ends of the shafts (h) (h^2,) which shafts are furnished with hand levers (b,) which are checked or chocked by pins (w) in the holes of the plate or disk

(P.) Since many of those parts above alluded to, which are in any wise different from the ordinary practice, constitute the subjects of other applications filed simultaneously with this, in which they will be particularly and fully explained, I shall here only describe, fully, that feature of the machine which constitutes the subject of this application. It will be seen, by reference to the drawing, that arm (J) is formed with a hole (y) at one end to accommodate the shaft (c,) and with a curved guide flange (f) at the other end, to work in the groove formed between the projecting lip (r^2) of the guide plate (r) and the side of the box (A,) to which the guide plate is fastened, and said arm (J) is furnished with a projecting stud (t,) which constitutes the axle of the master wheel (B,) and with a stud (3^2) for the intermediate gear (M,) which mashes on one side into the main driving gear (D,) and on the opposite side into the pinion (S) on the end of the shaft (c,) which drives the cutting apparatus.

It will be understood that the axis of the gears, except that of pinion (S,) are arranged on a single piece (J,) and that the latter, turning only on the pinion shaft (c,) may be said so virtually hold in itself all the gearing, and it will be readily comprehended that when the centres of the gears exist in one plate or bar, thus the gears will always remain in perfect adjusment with each other, and it will be seen that while this important desideratum is attained by my improved method of construction the shifting of the main frame, relatively to the master-wheel axle, may be more readily accomplished than heretofore, and the machine is also rendered more simple
168 than when the bearing and axle, or axle alone, of the master wheel had to be shifted.

The method of changing the relative position of the main frame and master-wheel axle and retaining them in any desired position by means of the levers (c c^2,) cords (o 6^2,) and shafts (h h^2,) and hand levers, constitutes the subject of another application in which said method will be found fully explained and need not be reiterated in this application.

It will be understood that my invention may be subjected to various modifications of the embodiment illustrated without departing from its spirit.

The gear (M) may be taken off of its shaft or stud when desired, when the machine can run along with driving the cutting aparatus.

What is claimed as the invention of the said Thomas S. Steadman, and is desired to be secured by letters patent, is the main frame or box (A,) which carries the pinion which drives the cutters in combination with the arm or supplementary frame (J,) provided with axle (t) and the main wheel and gearing, substantially as described for the purposes specified.

I also claim the arm or supplementary frame, in combination with the master wheel and gearing, when said arm or supplementary frame is so connected with the main frame as to vibrate from and around the pinion shaft, substantially as shown and described for the purpose set forth.

In testimony whereof, I have hereunto set my hand and affixed my seal, this 27th day of March, A. D. 1860.

W. N. WHITELEY, JR. [SEAL.]

Witnesses:
SOL. J. HOUCK.
EMANUEL J. RIEGEL.

169 No. 7.—*Reissue No.* 986.

THE UNITED STATES OF AMERICA.

To all to whom these letters patent shall come:

Whereas W. N. Whiteley, jr., of Springfield, Ohio, assignee of Thomas S. Steadman, of Murray, New York, has alleged that said Thomas S. Steadman did invent a new and usefull improvement in clover and grass-seed harvesters, (for which letters patent were issued to said Steadman, dated May 23, 1854, which letters having been surrendered by said assignee, the same have been cancelled and separate letters ordered to issue to him on three amended specifications,) which he stated had not been known or used before his application, has made oath that he was a citizen of the United States; that he did verily believe that he was the original and 1st inventor or discoverer of said improvement, and that the same had not, to the best of his knowledge and belief, been previously known or used; said assignee having paid into the Treasury of the United States the sum of thirty dollars, and presented a petition to the Commissioner of Patents signifying a desire of obtaining an exclusive property in the said improvement, and praying that a patent may be granted for that purpose.

These are, therefore, to grant, according to law, to the said W. N. Whitely, jr., his heirs, administrators, or assigns, for the term of fourteen years, from the twenty-third day of May, one thousand eight hundred and fifty-four, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said improvement, a description whereof is given in the words of the said W. N. Whiteley, jr., in the schedule hereunto annexed and is made a part of these presents.

In testimony whereof, I have caused these letters to be made patent, and the seal of the Patent Office has been hereunto
170 affixed. Given under my hand at the city of Washington, this nineteenth day of June, in the year of our Lord one thousand eight hundred and sixty, and of the independence of the United States of America the eighty-fourth.

[SEAL.] JACOB THOMPSON,
Secretary of the Interior.

Countersigned and sealed with the seal of the Patent Office.
PHILIP F. THOMAS,
Commissioner of Patents.

[Here follows diagram, marked page 170.]

The schedule referred to in these letters patent and making part of the same.

To all whom it may concern·

Be it known, that Thomas S. Steadman, of Murray, in the co. of Orleans, and State of New York, invented certain new and useful improvements in clover and grass harvesters, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, which make part of this specification.

This invention relates to that description of machine in which the main frame carrying the cutting apparatus and the master wheel which drives the cutters are capable of moving up or down, each independently of the other as the machine moves over the surface of the ground, so that the cutting aparatus may adapt itself to the unevenness of the ground over which the machine travels, while, at the same time, the master wheel, the axle of which is not located in the same vertical plane that passes through the line of bearing the cutting apparatus on the ground, may likewise follow the undulations of the ground's surface.

The invention which constitutes the subject of this application consists in so connecting the main frame or box of the machine, to which the fingers are attached to the arm or supplementary frame on which the master-wheel axle is formed or fastened, that each shall be kept always parallel with the other, while each is allowed to move up and down independently of the other, and the gearing carried by each frame kept constantly in connection during all their movements, as will be hereinafter fully described.

To enable those skilled in the art to make and use my inven-
171 tion, I will proceed to describe the method in which I have practiced the same, referring by letters to the accompanying drawings forming part of this specification, and in which figure 1 represents a side elevation of the machine; figure 2 represents a front elevation; figure 3 represents a cross section at the line x x of figure 1; figure 4 represents a perspective view of the guide plate of the arm or supplementary frame; figure 6 represents, in detail views, the arm or supplementary frame and gears; figure 7 shows a cross section at y y, fig. 4; figure 8 is a cross section at the line z z, of figure 5. Similar letters denote the same parts in the different views. A represents the main frame or box of the machine; B is a caster wheel near its centre and rear end, on which the rear end rests for permitting the machine to turn freely; C and D are two larger wheels, which serve to support the main frame or box when the guard finger bar E (which is the front bar of the box A) is not resting on the ground, and one of which, C, is the master or main driving wheel of the machine; c, is its axle, formed or *or* secured to and near the rear end of the arm or supplementary frame F, whose forward and vibrating end is hung on the projecting end of the pinion shaft a, (which is confined to the main frame or box A by its boxes b and b,) and there
l ld by a flange plate d, which permits it to be sliped on and off of
l shaft when turned on it; the wheel D is hung on an arm or sup-

plementary frame G, similarly constructed, hung and retained as that of F; these arms, the pinion shaft, and main frame vibrate from the axles of the wheels C and D as fixed centres of motion, while they and the main frame vibrate from and around the pinion shaft on the main frame or box as their centres, while main frame or box rises toward or lowers from the axles of the ground wheels C and D; these and the ends of the arms F and G are held parellel with the main frame A and guided, in moving up and down by the side of the
172 frame or box, by guide plates H and I fastened to the main frame or box which forms, with the frame, a groove in which each arm is held as the main frame raises and lowers while the fingers thereto attached pass over uneven surfaces; J and J are the levers by which the vibrations of the main frame are limited, and that limit varied as will be seen by reference to figures 3; e and f are cords by which the levers J and J are operated, which pass over pulleys g and h on the outer ends of windlass shaft i and J, which shaft are furnished with hand levers h and b, which are checked or chocked by pins m and n, placed in such of the holes in the plate or disk o as will give the desired limit of vibration to the main frame and finger bar thereto attached, and vary said limit of vibration as shown at figure 1 of the drawings; L is the intermediate wheel, and P is its axle, formed on or secured to the arm or supplementary fram F; this intermediate wheel gears with the master-wheel gears M and the pinion r for driving the cutters, and also giving them the right motion, and is placed loosely on its shaft a that it may readily be removed when not desired for driving the cutters, as is the case when driving the machine to and from the barn to unload it, &c.; E is the guard-finger bar of the box A; S are the guard fingers, and t are the cranks on the pinion shaft a, (confined by its boxes b and b^1;) the bars U and U^1, which are hinged at their rear ends to swinging bars v v^1, are pivoted to the upper edges of the frame A; T is the cutter bar attached to the bars U and U^1; x are the cutters; Q is the rake; R are the shafts or thills between which the animal that draws the machine is hitched; these are hinged to the front of the main frame or box for permitting it, and the master wheel to each have an independent action to the ground. As most of these latter mentioned parts from the subject of applications A and C, no particular
173 description of their operation need be here given. It will be observed that the arm or supplementary frame F, on which the master-wheel axle C is formed or secured, is made with a curved portion r, see figures 3, 4, and 6, which is curved on the arc of a circle, the centre of which lies in the centre of the hole w, into which the pinion shaft a fits, and that this curved portion r is formed with a rebate or rabbet N, (see figures 3 and 4,) to accommodate the lip of the retaining strap or plate H, which retaining plate is secured to the side of the main frame or box of the machine (as seen at figures 1 and 3;) it will be readily seen that when the main frame A and master-wheel axle and of the arm or supplementary frame F are connected as above-described, that they will each maintain a parallel position relatively to the others, while one rises and the other lowers;

the master wheel will of course always follow the surface of the ground unless its depressions are of less curvature than that of the wheel periphery; it will also be seen that the lever, when in its position, shown in red, limits the vibration of the main frame A or box carrying the fingers and cutters and the arm or supplementary frame F, and when moved to that in black varies the limit of said vibration; it will be understood that the arm or supplementary frame G is in all respects connected with the main frame A in the same manner as that of F; thus it will be understood that I do not wish to limit my claim of invention to the precise manner of constructing the parts such as I have adopted and found to work well.

What is claimed as the invention of said Thomas S. Steadman, and is desired to be secured by letters patent is—

In combination with the main frame or box A, and arm or supplementary frame F, on which is formed or secured the master-wheel axle, the employment of a retaining arc H or its equivalent, the whole constructed and arranged in such a manner that the main frame, or box and arm, or supplementary frame, which its master-wheel axle, will be held in parellel planes relatively to each other while they are moving up and down, substantially as and for the purposes herein set forth.

In testimony whereof, I have hereunto set my hand and affixed my seal this 27th day of March, 1860.

[SEAL.] W. N. WHITELEY.

Witnesses:

SOL. J. HOUCK.

EMANUEL RIEGEL.

174 UNITED STATES OF AMERICA,

Southern district of Ohio, ss:

I, John McLean, clerk of the circuit court of the United States within and for said district, do hereby certify that the foregoing transcript is accurately copied from the record, as the same is kept, and the papers, as the same are on file in this office.

In testimony whereof, I have hereunto set my hand and affixed the seal of said court, this 10th day of May, A. D. 1867, and in the 91st year of the independence of the United States of America.

Attest: JOHN McLEAN,

Clk. Cir. Ct. U. S., S. D. O.

175 The United States of America, Supreme Court of the United States.

To William A. Kirby & David M. Osborne, greeting:

Whereas, William N. Whiteley, Jerome Fassler, and Oliver S. Kelly, obtained the allowance of an appeal to the judges of circuit court of the United States for the southern district of Ohio, directed to remove into the said Supreme Court, to be holden at the city of Washington, on the first Monday in the month of December next, the record of a certain plaint, process, proceedings, and judgment in a

suit in equity, wherein you, the said William A. Kirby and David M. Osborne, in that action lately recovered against the said William N. Whiteley, Jerome Fassler, and Oliver S. Kelly, a decree and judgment for two thousand five hundred dollars and costs, as by the said record in the said circuit court remaining appears, in which said record and proceedings, and also in the rendition of the judgment thereupon, manifest error hath intervened, as by the said William N. Whiteley, Jerome Fassler, and Oliver S. Kelly, we are informed, and the said appeal granted, issued, and allowed as aforesaid, for the purpurpose of correcting the errors aforesaid alledged, if any there be. You are, therefore, hereby commanded and cited, to be and appear before the judges of the said Supreme Court, at the city of Washington, at the next term of said court, to be holden on the first Monday in the month of December next, to have the errors aforesaid corrected, and the judgment of our said Supreme Court thereupon.

Witness, the Honorable Salmon P. Chase, Chief Justice of the United States of America, this 28th day of November, in the year of our Lord one thousand eight hundred and sixty-six, and of the independence of the United States of America the 91st.

H. H. LEAVITT,
One of the Judges of said Court.

We accept service of the within citation this 30th day of November, 1866.

MASON & BOWMAN,
Solicitors for William A. Kirby and David M. Osborne.

No. 242
now 98.

SUPREME COURT.

SUPREME COURT, UNITED STATES.

WILLIAM N. WHITELEY, JEROME FASSLER AND OLIVER T. KELLY,
Appellants.
vs.
WILLIAM A. KIRBY AND DAVID M. OSBORNE,
Respondents.

Brief and Points for Respondents.

THE CASE.

A bill in equity was filed by the Respondents against the Appellants, for an account and an injunction.

The bill alleged that the Complainants were the owners of a re-issued Patent, which had been granted to them on the 28th of January, 1862, upon the surrender by them of

an original Patent, which had been granted to one Byron Densmore, on the 10th day of February, 1852, for improvements in Reaping Machines, and that the Defendants had infringed that re-issued Patent.

This bill was filed in the Sixth Circuit and Southern District of Ohio.

The Defendants appeared and answered. The answer denies—

1st. That Densmore was the first inventor of the improvements patented.

2d. They insist that the surrender could be made by Densmore only, and could not be made by the Complainants as his assignee.

3d. They deny that the surrender was for good cause.

4th. They deny that the re-issue was for the same invention as the original patent; and

5th. They deny that they have infringed either of the inventions described in said original *and* re-issued patent. Fol. 26.

Proofs were taken by each party, and the cause was brought to hearing before Mr. Justice Swayne; and in October Term, 1866, an interlocutory decree was made, sustaining the Patent, and declaring the infringement, and referring it to the Clerk, as a Master, to ascertain the damages. (Fol. 36.)

On the 30th of November, 1866, an appeal from this decree was prayed for and allowed. (Fol. 38.)

On the 2d day of April, 1867, the decree was *modified*, or at least it is so expressed by the Clerk. (Fol. 40.) In other words, a *final* decree was entered on that day. (Fol. 41.)

POINTS.

First.—This Court has no jurisdiction upon *this* appeal, because

1st. The decree appealed from was not a final decree.

2d. The parties cannot confer jurisdiction by consenting that the final decree, when entered, shall be made as of a previous day.

The language used is: "Now, therefore, it is ordered, "(both parties agreeing thereto,) that said decree be cor- "rected by striking therefrom so much of it as relates to a "reference to a master, and inserting in lieu thereof the fol- "lowing: And it appearing to the Court that the parties "have waived a reference to a Master, and have agreed that "the gains, advantages and profits of the Defendants, for "which they are liable in this action, shall be fixed at two "thousand five hundred dollars, and that the costs in this "suit, for which the Plaintiffs are entitled to recover the "sum of one hundred and fifty-seven dollars and thirty-two "cents. It is ordered and adjudged by the Court that the "Plaintiffs recover of the Defendants two thousand five "hundred dollars damages, and their costs taxed at one "hundred fifty-seven dollars and thirty-two cents, and ex- "ecution issue therefor, as upon judgments at law.

"And it is further ordered that this correction and entry "be made as of the twenty-fourth day of November, 1866." (Fol. 41.)

There is a strange confusion of dates in this record. The interlocutory decree is of October Term, but specifies no day when entered. (Fol. 36.) The prayer for appeal is

recited by the Clerk to have been made on the 30th day of November, 1866. The appeal bond bears date November *thirteenth*, 1866. (Fol. 39.) The sufficiency of the sureties is sworn to November 30, 1866. It does not appear to have ever been approved.

The final decree is recited to have been entered on the 16th day of April, 1867. (Fol. 40.) And it is ordered that it shall relate back to Nov. 24th, 1866. (Fol. 42.)

I submit that no act or agreement of the parties, nor any order of the Circuit Court, nor both combined, could render a void act valid. If this Court did not obtain jurisdiction by the appeal *when made*, then it never has obtained jurisdiction.

That this question may be raised upon the argument, see Weston vs. The City Council of Charleston. 2 Peters 449. That the decree entered in October Term was not a final decree, see Humiston vs. Stainthorp. 2 Wallace 106. That jurisdiction cannot be conferred either by the Circuit, or by consent of parties, needs no argument.

Second.—The Defendants have failed to prove invention in any other person prior to Densmore.

The history of his invention is as follows:

In June, 1846, he filed his caveat. In that he says:

"My invention consists * * * ; For "giving the proper elevation to the cutters, platform, and "connected machinery above the surface of the ground, ac- "cording to the height of the grain to be cut." This caveat, although in evidence, is not printed in this record. Fol. 68.

The record does not show when his application for a patent was made. "The first machine was tested two

" years before the Reaper trial at Springfield, Ohio." (Fol. 98.) It appears by the deposition of Mr. Warder that this Reaper trial was in 1852. (Fol. 75.) Hence Densmore's first machine was tested in 1850. Twenty-one were made the next season, 1851. Forty, fifty, or sixty in 1852.

That these machines are the same as the one patented. (See Fol. 101.)

This machine was used as a Mower in 1853, and was successful, except that it was not geared sufficiently high. Mr. Densmore then abandoned the making of Reapers, because of some question of infringement between him and Mr. McCormick. (Fol. 101.)

Hence the invention of Densmore was reduced to practical form as early as the harvest of 1850.

To antedate this, defendants produce:

1. Platt's patent of June 12th, 1849, which is Defendants' exhibit No. 3. (Fol. 136.)

2d. Churchill's patent of March 16, 1841, which is Defendants' exhibit No. 4.

3d. E. P. Cavett's rejected application. Rejected in 1852. (Fol. 160.)

4th. Re-issues of a Patent granted Thomas S. Steadman, May 23, 1854, Nos. 985 and 986. (Fol. 164, 169.)

As Cavett is two years, and Steadman four years after Densmore, it will not be necessary to give them any further consideration. In regard to Platt's patent, Defendants' expert witness says: " I find in exhibit 3 the description and " drawing of a Harvester, in which a frame carrying the " cutting apparatus is hinged or jointed to another frame, " upon which the driving wheels are situated, and that the

"former is made to be raised and lowered for the purpose "of adapting the cutters to cutting off the grain at different "heights from the ground." (Fol. 62.) And that is all the testimony in regard to it. No proof whatever that any device therein in any wise met the devices claimed and patented by Densmore or his assignees.

In regard to Churchill's, (Defts' exhibit No. 4), the same expert says: "Exhibit 4 is a description and drawing of "another Harvester, in which there is a frame which carries "the cutting apparatus, also a separate frame for the driving wheels. "The former is adjustable relatively to the latter, being "raised and lowered *by levers*, and *retained* by standards, the "frame which carries the cutting apparatus rotating around "a fixed point in the wheel frame." (Fol. 62.) And we hear no more of that. Not one word of comparison is made by this expert between the Densmore invention and this exhibit No. 4.

That this re-issued Patent was granted by the Office with full knowledge of both Platt's and Churchill's models is at least sufficient to balance the testimony of this witness.

Third.—The next issue made by the answer is, "that no "one but the said Densmore was by law authorized to make "said surrender, and obtain such re-issue." (Fol. 25.)

In answer to that, I cite the act of Congress of 1836, section 13, which gives the right to the assignee in express terms.

Fourth.—The next issue made by the answer is, that "they also deny that said surrender and re-issue were for "good and lawful cause." (Fol. 26.)

In regard to this, in the absence of fraud or want of jurisdiction, neither of which is alleged, the act of the Commissioner is *prima facia* evidence of right; and as no testimony was offered upon this issue, it needs no further attention.

Fifth.—The next issue made by the answer is, that "they "also deny that the said re-issued patent was for the same "invention as the original patent granted to said Byron "Densmore." (Fol. 26.)

That it is for the same invention *made by him*, is proved by his deposition. (Fol. 97 to 102.) That it is for the invention shown in his model has not been attempted to be disproved, no witness having been inquired of upon the subject.

Prima facia the act of the Commissioner in granting the re-issue is sufficient, and requires, at least, *some* testimony to overturn it; there being none in this case upon that subject, the question may be thus dismissed.

Sixth.—The next and last issue made by the answer is that "Defendants deny that they have ever infringed either said "original or re-issued patents, or that they have ever made, "sold or used reaping or mowing machines containing any "or either of the inventions described in said original and "re-issued letters patent." (Fol. 26.)

The defendants' denial of the infringement is based upon the assumption that this patent is merely for a *new* combination of *old* parts, and hence, in order to prove an infringement, there must be proof not only of the use of all the parts constituting the combination, but also proof that the de-

fendants avail themselves *of all the functions which that combination is capable of performing.*

But we submit that this patent is for improvements *in the several parts* which are used to perform the different functions, as well as for a new combination of these parts, and therefore if these parts, *or parts substantially like them*, have been used by the defendants, to perform *either of the functions* of which these parts thus constructed and combined by Mr. Densmore were intended to perform, and capable of performing, the infringement has been made out.

In the specification to this re-issue it is said, "the nature "and principles of the said invention relates

"1st. To the construction and combination of two frames, "the one for supporting the driving wheel, and the other for "supporting the cutting apparatus, and bringing the said "frames together in such a manner that the driving wheel "and cutting apparatus may each follow the irregularities "of the ground independently; and also that they may be "bolted together for supporting the cutting apparatus at any "desired height," (Fol. 129,) and in summing up, what is claimed is

"1st. Hanging the driving wheel in a supplementary "frame or its equivalent, which is hinged at one end to the "main frame, while its opposite end may be adjusted and "secured at various heights, or be left free as desired; "whereby the cutting apparatus may be held at any desired "height for reaping, or be left free to accommodate itself to "the undulations of the ground for mowing, substantially "as described." (Fol. 133.)

As we understand the answer, the use of *all* thus described

and claimed, except that part in the claim which describes the state of the supplementary or secondary frame when mowing, is admitted.

The language of the answer is as follows:

"Said machines were constructed with a main frame, "which carries the working parts of the machinery, includ- "ing all the gearing, except the gear wheel upon the driv- "ing wheel. To this main frame, and revolving in relation "to it around a common center, which is the pinion shaft, is "attached a secondary frame, which carries the driving "wheel only." (Fol. 26.)

"This secondary frame is not left free to play up and down, "but is prolonged beyond the driving wheel, a standard in "form of an arc, which arises from the rear of the main frame. "This standard is provided at various heights with holes, "through which and the end of said secondary frame, a pin "passes, which secures said secondary frame, and with it the "axle of the driving wheel at certain fixed distances, above "the main frame." * * * * (Fol. 27.)

"Defendants say * * * that the primary and secondary "frames in their Combined Reapers and Mowers are hinged "in the opposite direction from that in which they are "attached in the machine patented to said Densmore." (Fol. 27.)

Now from this answer it appears

1. That the defendants use "the construction and combi- "nation of two frames," *they* call one the *main frame* and the other the *secondary frame*. In their testimony, what is called the secondary frame in the answer, is called a "bow" by the expert Clough. (Fol. 60, 65.) But it is called a "yoke"

by all the other witnesses on that side. Plaintiffs call theirs, the one the *main frame*, and the other the *supplementary frame*.

2. The defendants also employ one of their frames, "for "the support of the driving wheel," and the other "for the "support of the cutting apparatus," for the *cutting apparatus* is a part of the *working parts*.

3. They "hinge the two frames together:" they say they hinge at the opposite end from that where the hinge is used in the Densmore, which they will hardly claim to be a substantial difference.

4. They so hinge and construct their frames "that they "may be bolted rigidly together for supporting the cutting "apparatus at any desired height for reaping."

Hence, from the answer alone, it appears, that so far as the Densmore machine is described as a reaper, the defendants' machine is not only substantially, but almost, if not quite, literally the same thing, and used to perform the same functions, in the same manner and precisely with the same result.

In the language of the claim made by the complainants in the re-issue, defendants "hang the driving wheel in a sup- "plementary frame or its equivalent, which is hinged at one "end to the main frame, while its opposite end may be ad- "justed and secured at various heights, * * * whereby the "cutting apparatus may be held at any desired height for "reaping."

(The manner of distributing the gearing upon the two frames, or the point of oscillation of the supplementary or

secondary frame has nothing whatever to do with the matter.)

The proof also shows the same thing. In fact the defendants in their proofs, took especial pains to prove by each witness, that their machine was used to cut at various heights, and that it complied with the requisites above set forth.

And the question recurs: Is this an infringement of the plaintiffs' patent?

The principle was settled by Judge Nelson in the case of Blanchard vs. Beers, (2 Blatch. 411.)

In that case, (I quote from Judge Nelson's opinion,) "The "invention consists in the combination of four instruments, in "the mode pointed out in the patent, by which the machine "cuts irregular forms longitudinally or lengthwise, and trans- "versely or crosswise, by a joint operation.

"The machine of Blanchard embraces in its scope and op- "peration the cutting of almost every species of irregular form "* * * such as gun stocks, lasts, &c., by means of the appli- "cation of the combination or principle which he has discov- "ered, and it is claimed by the plaintiff that the defendants "have appropriated this combination or principle, *in order to* "*obtain the benefit of one of the uses* of his machine, namely, "for making wagon spokes.

"As I have already stated, the invention of Blanchard "consists in the combination of four instruments, the model, "the rough material, the tracer or friction wheel, and the ro- "tary cutter, in the mode he has particularly described, by "means of which the machine cuts irregularities, longitudin- "ally and transversely, by one joint operation. This combina- "tion thus formed may be and is applied successfully to the

" turning of wagon spokes; and it is insisted by the plaintiff " that the defendants have embodied this combination in their " machine, and are by means of it enabled to do the same " work. If this be so, they have infringed upon the rights of " Blanchard, *although their machine has been so constructed as* " *to perform but one of the functions of Blanchard's. For if* " *they can appropriate the Plaintiffs' combination for one of* " *the uses or functions of his machine, because it is performed* " *separately, another person may appropriate another func-* " *tion, and so on, until there is nothing left in his machine* " *unappropriated.*"

Now apply that reasoning to this case.

The Densmore invention consists in the combination of two frames, and in hanging the driving wheel in the supplementary frame or its equivalent, which is hinged at one end to the main frame, while its opposite end may be adjusted and secured at various heights, or be left free as desired, whereby the cutting apparatus may be held at any desired height for reaping, or be left free to accommodate itself to the undulations of the ground, for mowing. That is to say, this combination of frames, when thus constructed, arranged and hung, has two distinct functions, one to enable the operator to fix the height of the cut for reaping. The other to enable the operator to allow the cutter bar to slide upon the ground, and thus cut close when mowing.

The defendants use the two frames. They arrange and hang them in the same manner, but they only desire to avail themselves of the one function, to wit, to *fix the height of the cut* for reaping. Now we say, in the language of

Justice Nelson, "if they can appropriate the plaintiffs' com-
"bination for one of the uses or functions of his machine, be-
"cause it is performed separately, another person may appro-
"priate another function, and so on." In regard to this Patent the defendants may, in a combined machine, use plaintiffs' combination and improvement for reaping, and some one else may, in a combined machine, use the plaintiffs' combination and improvement for mowing, and thus the whole will be used, and nobody liable.

See Laws Dig. 187, Sec. 12, 188, Sec. 19, p. 190, Sec. 38, 39, 43, p. 366, Sec. 12, p. 367, Sec. 18, p. 368, Sec. 34, p. 369, Secs. 39, 40.

Parker vs. Harworth, 4 McLean's Rep. 473.

The principle contended for by the defendants, amounts practically to this: Defendants say

It is true that we *use* the two frames, combined as described in plaintiffs' patent *for Reaping*. We also *make* the machine so that it *can* be used as described in the plaintiffs' patent *for mowing*, but we make another part of our machine, to wit, the flexible tongue, so that we are not *compelled* to allow the two frames to operate *loosely* when mowing. And we instruct those to whom we sell, that it operates best when the standard and secondary frame or yoke are pinned and held rigidly together, but at the same time the purchaser can do as he pleases in the matter. If he uses our machine with a rigid tongue, which we furnish him, and with the two frames loose, *he* must answer for the infringement, *we* will not. See ques. 3, to Defendants' witness, Kyle, (Fol. 72), ques. 2, to Defendants' witness, Downes, (Fol. 86), ques. 2, to their witness, Taylor, (Fol. 93), ques. 2, to their witness, Houck, (Fol. 96).

We submit that this is not sound doctrine. Parties cannot thus evade the plaintiffs' patent.

But if we are mistaken in this, then we reach the question,

Seventh.—Does the Defendants' combined machine infringe Plaintiffs' patent, both as a Reaper and as a Mower? In proof of this I submit that the Defendants' do "hang "their driving wheel in a supplementary frame or its equiv- "alent, which is hinged at one end to the main frame, "whilst its opposite end may be adjusted and secured at "various heights, *or be left free as desired;* whereby the "cutting apparatus may be held at any desired height for "reaping, *or be left free to accommodate itself to the undu- "lations of the ground for mowing.*"

In order that we may approach this question understandingly, we will refer to the specification and model of the Densmore machine to show what the Patentee means when he uses the expression "*whereby the cutting apparatus may "be left free to accommodate itself to the undulations of the "ground when mowing.*"

As the counsel for the Defendants, judging from the questions asked some of the witnesses, seemed to think that the expression implied a freedom on the part of the wheel to move entirely unrestrained even laterally by the retaining arc. See ques. 8 to the witness Reigel, (Fol. 50), where it is asked "whether or not the pin was ever taken out (of "Defendants' machine) * * * so as to leave the wheel to "move independently of the frame." And ques. 5 to the witness Stickney, "whether or not the wheel frame is ever "left *free to move* when the machine is at work?"

Ques. 5 to the witness Hanes, (Fol. 56): "If the pin is "ever taken out, and the wheel frame left free, *so that the* "*main wheel and main frame work independently.*"

The fallacy of this idea of *unrestrained* action of the *driving wheel* in the Densmore machine is clearly shown, as well by the model, as also by the description contained in plaintiffs' specification, as it appears from each that the driver's seat is placed upon the top of the upright posts D. D, (Fol. 119), which form the sides of the retaining arc in the Densmore machine; and hence the rear end of the supplementary frame, the position of which controls the height of the cut, never could pass out from between the posts D. D., any more than the yoke in Defendants' machine could pass out of or over the standard, with the pin inserted above it; unless it passed over the head of the driver.

In fact, practically the placing the pin through the standard, *above the yoke*, in Defendants' machine, gives to his cutting apparatus *precisely* the same freedom to accommodate itself to the undulations of the ground for mowing, as is possessed by the Densmore machine, when the pin in that machine is entirely withdrawn, leaving the driver's seat to prevent the rear end of the supplementary frame from escaping from the retaining arc. Nor is there any reason why the pin in the Densmore machine, when taken out of the holes in the sides of the supplementary frame, should not be placed *above* that frame.

The answer alleges that "this secondary frame (in De- "fendants' machine) is not left free to play up and down, "that if the supplementary frame were left free to play up "and down, so as to accommodate ITSELF to the undula-

"tions of the ground, said main frame would drop upon the "ground, and the machine be useless." (Fol. 27).

This allegation does not *quite* meet the case, as the pleader has substituted the *secondary frame* for the *cutting apparatus*. But we will examine the question as presented by the bill, assuming that the answer was intended to be responsive, and to deny that the secondary frame in Defendants' machine is or can be left free to play *up and down*, so that the cutting apparatus may be left free to accommodate itself to the undulations of the ground when mowing, as that is the only issue *upon this subject* which *could be made by the answer*.

The answer further alleges "that if the secondary frame "were left free to play up and down, so as to accommodate "*itself* to the undulations of the ground, said *main frame* "would drop upon the ground, and the machine be useless." (Fol. 27.) The same inaccuracy of expression is here again used, substituting the secondary frame for the cutting apparatus. But I will assume, as before, that this also was intended to be responsive to the allegations of the bill which it was intended to answer.

The Court will note that the only reason here given why the machine in such a case would be useless, is, that "*said main frame would drop upon the ground*," and this reason is evidently based upon the allegation in the answer, that "the tongue of the machine is hinged thereto at the front "of the main frame."

But the reason why defendants' machine could not be operated as a mower, with the secondary frame left free to play up or down, as given by ~~all the~~ some of Defts witnesses, was, that if

thus operated, there would not be sufficient weight upon the driving wheel to give it traction sufficient to drive the cutters.

See defendants' evidence. Their first witness.

Emanuel Reigle, who was their machinest, says: He never saw the machine used with the pin out, that, "That never "was the design. If you take the pin out, the main frame "would drop on the ground ,and never do any cutting." Ans. to ques. 8. (Fol. 50.)

"*For the reason that there would not be weight enough on "the main wheel to drive the knife.*"

Henry Stickney only says: "That not being the design." Ans. to ques. 5. (Fol. 53.)

Henry Oxtoby says: He never left the yoke "free to move "up and down when the machine was at work."

Samuel Shuman says: He always used his machine with the pin fast, that the machine will not run when the wheel frame is left loose." Ans. to ques. 9. (Fol. 55.)

Jameson W. Hanes says, he always used it with the pin in.

William Clough the expert, who testified without ever having seen one of defendants' machines anywhere, but who could tell all about their capabilities from looking at the model and drawings, *and from reading the testimony of other witnesses*, testifies positively, "I find in the construction "of defendants' machine it would be impracticable to operate "the machine without securing the main frame in some fixed "position relatively to the ground or driving wheel. It is, "therefore, not susceptible of being left free, as provided in "complainant's patent." Ans. to ques. 5. (Fol. 60.)

Not even satisfied with this, in answer to the next question, he says, "I find * * * all the gearing, except the cogs, "cast on the main wheel, and supported on the main frame, "leaving the driving wheel with nothing but its own weight "and a portion of the weight off he aforesaid bow to rest upon "the ground, and give adhesion to the driving wheel, this "*would be insufficient to render the machine operative.* To "make the machine operative, it is necessary to depress the "after part of said bow, *and confine it to the said standard at* "*the rear*, and attached to the main frame, so that the weight "of the main frame, or a sufficient portion of its whole weight "is imposed upon the driving wheel." (Fol. 60, 61.)

The cross-examination could not shake this *fact*, for the witness spoke of it as a *settled* and *undoubted fact*, and not as a mere opinion.

But some others of the defendants' witnesses testified very differently when speaking from their experience with defendants' machine in *actual use* in the field.

Their witness Miller, says, "I sometimes used the pin *above* "*the yoke*, and sometimes through the yoke. It won't "make any difference, only a little change in the height of "the cut." Ans. to ques. 3 and 5, about one-third of his grass was cut with the pin through the standard and *above the yoke*. Ans. to cr. ques. 2. (Fol. 75.)

Their witness Miller was asked, ques. 3. "In what posi-"tion is the yoke of the said machine fixed, as regards the "standard, when you use it as a mower?"

Ans., "Generally with the pin *above the yoke*, and pos-"sibly it might have been all the time when I used it my-"self." (Fol. 77.)

Being asked by defendants' counsel, ques. 13, "Would it "make any difference as regards the cutting apparatus fol- "lowing the undulations of the ground, if the ground was "rough, and the machine arranged as described in the last "question?"

Ans., "I think it would, *if the pin was put through the "yoke, and the ground wheel would pass over a deep hole in "the ground, it would raise the outer end of the cutter bar "higher than in case the pin was above the yoke. In the "latter case the yoke would slip down on the standard, and let "the wheel into the hole without raising the cutter bar at the "outer end quite so high as if the pin was through the yoke.*" (Fol. 79.), and see the answer of this witness to ques. 14, 15 16, (Fol. 80.), and to cr. ques. 1. (Fol. 81)

James Foley, a farmer, who purchased one of defendants' machines in 1864, (defendants had proved that their machines for the different years were alike,) that upon using his machine as a mower, he placed the pin above the yoke, or in other words, with the supplementary or wheel frame free to play up and down independently of the main frame, and he says "it cut well, exceedingly well. I didn't see "much difference, it seemed to cut as well as when I used "it." Answer to question 4. (Fol. 104.)

Abraham Gordon, a farmer who was present to witness the experiment, and drove the horses, says "it cut well." Answer to question 2. (Fol. 105.)

Washington Ward, a farmer until the last two years, purchased one of the defendants' machines in June, 1864. He says, "When I first commenced using it I placed the pin in "the third hole, I think, from the top of the standard. When

"I got into very rough ground I put the pin in the topmost "hole of the standard, through the standard, only *above the* "*yoke*, as a mower. I used it part of the season, and in "smooth ground *I always used it above the yoke*, * * * and "I thought it cut lower than when the yoke was fastened." He also tried it in very rough ground, and it worked well, and he says "he generally put it above the yoke as a mower." Answer to questions 6, 7 and 8. (Fol. 107.)

William Duke, a farmer, who purchased one of defendants' machines in 1863, and first used it as a mower, with the pin through the standard *above the yoke*, and frequently used it so, and "It cut very well." Answer to question 8. (Fol. 110.)

William F. Cochrane, a practical machinist and a close observer of Reapers and Mowers *in the field*, he attended the trial of Reapers and Mowers, and saw defendants' machines tested at different times and in different places. He says: "It performed its work better on rough ground when the "pin was *above the auxiliary* frame, giving the wheel an inde- "pendent action in the auxiliary frame from the main frame." Answer to question 2. (Fol. 111.)

This witness was also present at the test in Hodge's meadows, and his testimony shows clearly that the test there was a fair one. He testifies, "We then tried it with the pin "above the yoke, and it performed equally well: and where "the ground was uneven, the pin being above the yoke, "*leaving the main wheel free in its bearings up and down* "*the standard, it worked easier, less tension on the horses'* "*necks, and cut in several instances where it could* not "have done if the pin had been through the yoke and "standard." Answer to question 6, (Fol. 112.)

And thus, I submit, that we have shown by the testimony of sundry witnesses, as well by those called by the defendants, as those called by the complainants, and from actual experiment in the field, that the defendants' witnesses were very much mistaken when they *guessed* that it was impracticable to operate the defendants' machine with the supplementary or wheel frame left free to play up and down independently of the main frame. Nor do the defendants offer any proof to contradict our witnesses upon that point.

Defendants' witness Foley, in answer to question 6, testified: "It cuts very well with the pin above the yoke; "but I don't see that there is any great advantage in it, and "don't see it yet, *unless you should meet with an obstruction "that would run under the fore part and strike the back part "of the frame. In that case the frame would rise up and go "over the obstructions. That is the only advantage I could "see in having the pin above the yoke.*"

There *is* a material difference between the testimony of an expert witness, testifying *his opinion*, and the testimony of an honest Farmer, when speaking from his own knowledge and experience!

Defendants' witness, Tomlin, testified in answer to question 4: "In mowing I have used the machine with the pin "through the yoke and the pin *above the yoke* both. I usu- "ally use it with the pin above the yoke because if the grass "gets under the cutters, it is easier to raise the machine to "get it out." (Fol. 85.)

Defendants' witness Downs, in answer to question 3, testified, "It worked well, and *I didn't see any difference, "whether it was through the yoke or above the yoke.*" (Fol. 82.)

Defendants' witness Whiteley testified, "I have used the "machine with the pin through the standard above the yoke. "but found no practical difference in the working of the "machine, and prefer to use it with the pin through the "yoke and standard, as it is intended to be used." (Fol. 89.)

And thus the matter was left by the defendants, those of their witnesses who *gave opinions* testifying that their machine *would not operate* as *a mower*, unless the pin was put through both the yoke and standard. But the Farmers who testified from experience told a very different story, as will be seen from the above extracts. To make the matter clear, beyond the possibility of a doubt, the Complainants procured one of the Defendants' machines, and had the experiment fairly tried in the presence of several practical Farmers, and we have proved conclusively that the Defendants have infringed our re-issued patent—that they have used all the elements of the combination and to perform the same functions, as described in our specification and claim. Complainants state the principle of the invention in their specification as follows:

"The nature and principles of the said invention relate:

"1st. To the construction and combination of two frames "—the one for supporting the driving wheel, and the other "for supporting the cutting apparatus, and bringing the said "frames together in such a manner that the driving wheel "and cutting apparatus may each follow the inequalities "of the ground independently, and also that they may be "bolted rigidly together for supporting the cutting appara-"tus at any desired height." (Fol. 18).

The Defendants' by their answer admit that they construct

and combine two frames—that one of them which they call the *secondary frame* carries the axle of the driving wheel; that the other, the main frame which carries the working parts, amongst which the cutting apparatus is included—that they hinge their two frames together. That they by a pin, secure said secondary frame at certain fixed distances above the main frame. But they say "This secondary "frame is not left free to play up and down, but is prolonged "beyond the driving wheel to a standard in form of an arc, "which rises from the rear of the main frame." (Fol. 27.) Hence the only issue made by the answer in regard to the infringement was, whether or not their two frames were "hinged together in such a manner that the driving wheel "and cutting apparatus may each follow the irregularities "of the ground independently." And this we have proved by a multitude of witnesses, as will be seen from the above extracts. Complainants' specification of claim is the following:

"1st. Hanging the driving wheel in a supplemental frame "or its equivalent, which is hinged at one end to the "main frame, while its opposite end may be adjusted "and secured at various heights, or be left free as de- "sired, whereby the cutting apparatus may be held "at any desired height for reaping, or be left free to "accommodate itself to the undulations of the "ground for mowing, substantially as described." (Fol. 22.)

I submit that we have found the Defendants' machine to contain every element of this combination, and that they in combination possess the same functions and have precisely

the same operation or result as is expressed in this claim.

I will enumerate the different elements of this combination.

1st. The driving wheel. Defendants' have that.

2d. The supplemental frame or its equivalent. Defendants' have the *secondary frame*, so called in the answer. Called "the Yoke" by their witnesses, and the "Auxiliary frame" by Complainants' witness, Cochrane. By whatever name called, it is the equivalent of Complainants' supplemental frame.

3d. The main frame. Defendants don't deny that.

4th. The cutting apparatus. That they don't deny. Then they use all the elements of this claim.

I will now show that these elements are *combined* in Defendants' machine, in the same manner as in the claim.

1st. The driving wheel is hung in the supplemental frame or its equivalent, that is to say, in their secondary frame or yoke. That is not controverted.

2d. Their secondary frame or yoke is hinged at one end to the main frame. That is not controverted, but they say, they hinge at the other end, which is immaterial. They hinge at *one* end.

3d. The opposite end (opposite to the hinged end) may be adjusted and secured at various heights. This, they not only admit but insist upon.

4th Or (the opposite end) may be left free as desired. This defendants deny, but we prove it by overwhelming evidence, not only that it *may be so* in defendants' machine, but that many of their customers desire it should be so, and use it free; in the language of the claim, *desire* it to be free.

5th. Whereby the cutting apparatus may be held at any desired height for reaping. This they do not controvert in regard to their machine, but insist upon.

6th, and last, or (the cutting apparatus) be left free to accommodate itself to the undulations of the ground for mowing. This, although denied, is abundantly proved.

And thus I submit we have proved the infringement fully. Not only that the defendants infringe complainants' Patent by using a substantial part of their Patented improvement, when they use their machine as a Reaper, but that they also use the residue of it, when they use their machine as a Mower. And therefore

Lastly.—The decree below should be affirmed with costs, and such damages as this Court is authorized to award.

DAVID WRIGHT,
Solicitor and Counsel for Respondents,
Auburn, N. Y.

Robert Clarke & Co., Printers, 65 West Fourth Street, Cincinnati, O.

Supreme Court of the United States

DECEMBER TERM, 1868.

William N. Whiteley, Jerome Fassley, and Oliver S. Kelly,
Appellants,

vs.

William A. Kirby and David Osborn,
Appellees.

Appeal from the Circuit Court of the United States, for the Southern District of Ohio.

BRIEF ON BEHALF OF APPELLANTS.

I. STATEMENT OF CASE.

The bill was filed March 26, 1863; the answer September 4, 1863, and the replication October 21, 1863. The cause came on for argument in July, 1866, and in October Term, 1866, a decree was entered for the complainants for $2,500, and costs.

The bill was filed to restrain the defendants from infringing letters patent for "improvement in harvesters," granted to Byron Densmore, February 10, 1852, assigned to D. M. Osborn and William A. Kirby, and reissued to them January 28, 1862, on an amended specification.

II. INVENTION.

The original patent was for an improvement in grain harvesters, which improvement consisted in certain combinations, or devices, for operating an automatic raker, and in a device for supporting the vibrating blade or sickle. As is usual in such cases, in illustrating the application of his invention to the harvester, the patentee described an entire machine, though no claim of invention was made to any part of it, except as stated. It appears, from the testimony of Densmore, the patentee, that the machine was invented about the year 1850; that it was tested as a reaper, but was never tried as a mower but in a single instance, in cutting from half an acre to an acre of grass, when it proved unsuccessful. The language of the patentee is as follows:

"*Question* 27. Are you certain that you ever did use it for mowing?

Answer. I am; but never succeeded very much in mowing with it."

He then states the changes necessary, in his opinion, to make it a successful mower, then:

"*Q.* 31. Why did you not make the alterations the next season?

A. I was engaged in other matters, and did not give my attention to it. *I never took up the mower after that.*

Q. 32. How much grass did you cut at the trial mowing which you made?

A. From half an acre to an acre."

The patentee also speaks of a machine constructed before this time, but being asked, Q. 23. "Did you mow with that machine," answers "No."

The term "harvester," in the patent office means, technically, a machine adapted to the cutting of grain rather than of grass; and, it appears from the statements of this witness, from the title of the patent, and from the description of the original machine, that it was invented and designed for harvesting grain only, adapted only to that purpose, and incapable of successful use for any other purpose. The patentee, in his specification, declares that he has "invented a new and useful improvement in reaping machines for cutting *wheat and other small grains*," and the fact that his claims of invention are confined to the devices connected with the self-raking apparatus show that this machine was not designed for a mowing machine, since rakers are employed only on reapers for the the purpose of gathering the grain in gavels; while, in mowing machines, the platform, the reel, and the rake are dispensed with, and the grass is allowed to fall on the ground, so that it may be spread by the operator to dry, instead of being collected in bundles or sheaves for binding.

This patent was sold to the appellees, complainants below, and on the eleventh of May, 1861, they applied in their own names for a reissue. The petition and specifications are signed by Kirby and Osborn, and two oaths are appended, one made by Kirby, and the other by Osborn. The patentee, Byron Densmore, in no way appears in the proceedings.

In the amended specifications that which was an "improvement in grain harvesters," becomes now an "improvement in harvesting machines," and in the specifications that which was an improve-

ment in *reaping* machines for cutting "wheat and other small grains," becomes "certain new and useful improvements in harvesting machines." In the original patent, Byron Densmore declared, "my inventions and improvements consist in a new arrangement for raking the grain from the machine. Likewise in a new arrangement for raising and lowering the machine to vary the hight of the cut, also in a new mode of hanging the sickle." The assignees declare that "the nature and principle of the said invention relate, first, to the construction and combination of two frames, the one for supporting the driving wheel, and the other for supporting the cutting apparatus, and hinging the said frames together in such a manner that the driving wheel and cutting apparatus may each follow the inequalities of the ground independently, and also bolted rigidly together for supporting the cutting apparatus at any desired hight. Second, in providing a ground wheel with a crank and lever for raising the outer end of the finger bar."

No mention is made in the amended specification of the arrangement for raking the grain from the machine, or for the mode of hanging the sickle. The parts of the machine which formed the subject of the claims of the original are neither mentioned in the specification or claims of the reissued patent, and the parts or devices which form the subject of the claims of the reissue are not referred to in the claims of the original, although in common with other parts of the machine, they formed a part of the original description.

Upon this state of facts, two points are suggested for the consideration of the court.

1. It is submitted that the Commissioner of Patents had no right to issue a reissued patent to the assignees upon their petition, oaths and specification alone; and

2. That a reissued patent can not be said to be for the "same invention" as the original, which embraces devices, none of which

are named or referred to in any way in the claims of the original patent.

First. The thirteenth section of the act of 1836 provides "that whenever any patent," etc., shall be "inoperative or invalid," for certain reasons named, "it shall be lawful for the Commissioner, upon the surrender to him of such patent, and the payment of a further fee of fifteen dollars, to cause a new patent to be issued to the said *inventor* for the same invention, for the residue of the period then unexpired, for which the original patent was granted *in accordance with the patentee's corrected description and specification.* And in case of his death, or any assignment by him made of the original patent, a similar right shall vest in his executors, administrators or assignees." What is the "similar right" which vests in the assignee? Clearly, it is the right to receive the new patent to be issued by the commissioner in lieu of the old one; and this patent, it is declared by the act, "shall be issued in accordance with the patentee's corrected description and specification.

In the sixth section of the act of 1837, it is enacted that "any patent hereafter to be issued, may be made and issued to the assignee or assignees of the inventor or discoverer, an assignment thereof being first entered of record, *and the application therefor being duly made and the specification duly sworn to by the inventor.*"

As the language of this section is general, and covers "any patent" hereafter to be issued, and as it is subsequent in date to the act of 1836, it is submitted that it applies to reissued patents as well as to those originally granted, and requires, in the case of such reissues, as in the case of originals, that the application shall be made and the specification sworn to by the inventor, if living, and not by the assignee.

It is admitted that the practice of the Patent office has been to grant reissues to assignees upon their petition, oath and specification. The consequences of this construction of the statute have

been sufficiently disastrous. It is difficult to perceive how an assignee could swear that the patentee intended to patent certain features of his invention omitted by him in the original claims; or, that such omission was made by "accident, inadvertence or mistake;" and the result has been that cases have occurred where the oath of the assignee has been met by the oath of the patentee that he had no such intention. It seems to have been thought by the Patent office that the patentee intended to patent every thing which is described in his original specification, of which the office shows no evidence that another was the inventor. But the fact may be, and often is, that there are sources of information known to the patentee which are not open to the office, such as the manufacture of unpatented machines of a similar character in his own neighborhood or in foreign countries, and that his claims are carefully drawn with a view to avoid claiming that which he knows to be old, or the invention of others. It may be, also, that there are features described in connection with his invention which have been suggested to him by others—by his workmen, by the constructor of his model, or by the draughtsman of the patent; and that while such features are introduced in the description as auxiliary to the improvement claimed, they very properly form no portion of the claim of the invention of the patentee.

But the assignee ignores all these sources of information, and boldly swears that every thing found in the description was the invention of the patentee, and that he intended to claim it as his own. The abuse of this privilege of reissue has become such a curse to the country, that it is believed that the time has come when the statutes relating to this privilege should receive a strict construction for the benefit of the inventor who has made an honest mistake in the description of his invention, but not for the purpose of enabling unscrupulous assignees to make a new invention for him.

Burr v. *Duryee*, 1 Wall, 531.

Plate I.

Fig. 1.

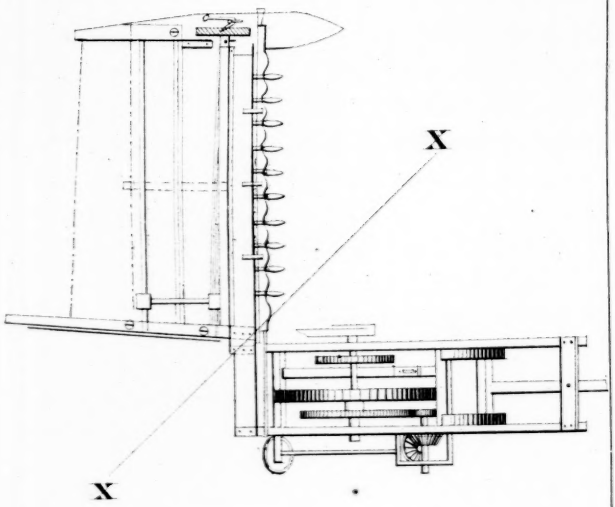
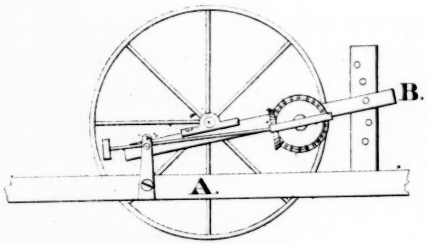


Fig. 2.



A. *Main frame.*
B. *Supplemental frame.*

DENSMORE.

Second. What is the invention of the patentee?

Section 6, of the act of 1836 provides that the patentee "in the case of any machine shall fully explain the principle and the several modes in which he has contemplated the application of that principle, or character by which it may be distinguished from other inventions, and shall *particularly specify and point out the part, improvement, or combination, which he claims as his own invention or discovery.*"

In pursuance of this law Byron Densmore in his original patent particularly specified and pointed out the "part, improvement, and combinations" which he claimed as his invention. These claims were introduced by the customary formula; "What I claim as my invention, and desire to secure by letters patent is," and then follow the claims, four in number, relating as already stated, to the raking mechanism and vibrating plate or sickle only, but, when the assignees surrender this patent and present an amended specification as a foundation for a reissue, they declare, in effect, that no one of these devices constituted the invention for which Byron Densmore desired a patent in 1852, but that his invention in fact was the device for hanging the main wheel in a supplementary frame, and in the employment of a crank and lever for the purpose of raising and lowering the outer end of the finger bar, to correspond to the hight to which it was raised by means of the supplementary frame. In the drawing upon the opposite page (plate I), the line X, X, divides the ground plan of the machine into two parts. The inventions claimed in the original patent are all to be found on the left hand or upper side of that line. The inventions in the reissued patent are all to be found on the right hand or lower side. Now, is it possible to say that the parts claimed in the reissue constitute the same invention with those claimed in the original patent? I concede that the inventions claimed in the original might be more perfectly described in the reissue, that parts claimed

in combination might be separated into their original elements, that parts claimed as elements might be united in combination. But is it possible, that where a patentee has by specification deliberately signed, and solemnly sworn to, declared that his invention is an improvement in the raking apparatus of a reaper, he can afterwards assert that an improvement in the mode of hanging the driving wheel is the same invention, and the very invention that he designed originally to patent? It has been decided that several inventions relating to the same subject matter may be included in a single patent.

Hogg v. *Emerson*, 6 How. 483.

This has given rise to the numerous claims which are found in the patents of the present day. Each of these claims is regarded, however, as constituting a distinct invention which might have been made the subject of separate letters patent. The claims of the original patent of 1852 might have stood side by side with those of the reissue of 1861, or they might have been divided and placed in separate patents. They covered different parts of the machine, different devices, different improvements, different inventions, and they are as distinct and separate from each other as if the one had been an improvement in the smoke stack of a locomotive for arresting the sparks, and the other had been an improvement in the crank of the main driving wheel of the same engine, because, forsooth, the patentee in illustrating the application of his new smoke stack had chosen to put into his specification a description of the locomotive to which it was to be attached. It is believed that the Supreme Court in the case of *Battin* v. *Taggert*, 17 How., 74, which has been the authority relied upon for the enlargement of the claims, never intended to open the door to such an extent as to enable a patentee to lay down one invention and take up another at pleasure, or, to aban-

don, in his reissue all trace of the improvement of the original patent, and substitute another device, in another part of the machine, performing an entirely different function.

Burr v. *Duryea*, 1 Wall, 531.
Sickles v. *Evans*, 2 Fisher, 435.
Carhart v. *Austin*, 2 Fisher, 543.
Whiteley v. *Swayne*. See Appendix.

In the case of *Sickles* v. *Evans*, Mr. Justice Clifford said:

"Improvements secured by reissued patents are very apt to be expanded, but the change in that behalf, in this case, is so great that in comparing the original patent with the reissue under consideration, it is difficult to find sufficient similarity to establish the identity. What was a 'new and useful method of tripping the drop cut-off valves of steam engines and regulating and adjusting the same,' has become a 'new and useful improvement in steam engines,' and what was an improvement in 'tripping cut-off valves' by a motion independent of the lifter has become 'an improvement in the coexisting movement of two reciprocating catching pieces.' * * Comparing the language of this claim with the claims of the original patent, and it is clear that they are foreign to each other and strangers.

* * * * * * * * *

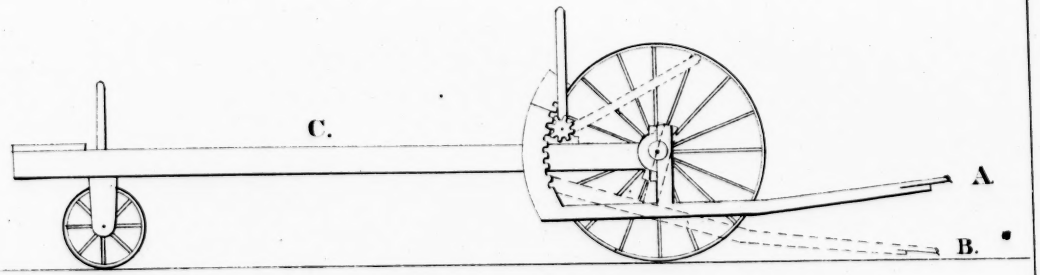
Where it appears on the face of the respective specifications as matter of law that the specifications and claims of the reissued patent are for a different invention from that secured in the original letters patent, the rule assumed (that the specification of the reissued patent is conclusive evidence of the identity of the invention) can not be sustained. Whenever it appears, upon a comparison of the two specifications and claims as matters of law arising on their construction that the reissued patent is for a different invention from that secured in the original patent, then the reissued patent is void and of no effect."

III. NOVELTY.

An examination of the state of the art at the time of the invention of Densmore will show that he was not the inventor of the idea of hanging the driving wheel of the harvester in one frame, while the cutting apparatus was in another, so as to secure independent action between the two frames, or so that the cutting apparatus might be raised or lowered with reference to the driving wheel, while the wheel itself remained on the ground. Illustrations of some modes in which this result was accomplished will be found in the patents of Churchill and Platt, and the rejected application of Cavett.

PLATT'S MACHINE was one of the old style of harvesters, constructed like the original McCormick, Read, and many other harvesters, in which the horse walked in the rear of the driving wheels and cutting apparatus. The frame, which was supported by the driving wheel to which the horses were attached, and upon which the gearing was located, remained at a uniform distance from the ground, while a second supplementary frame was hung or hinged to the first or main frame, and upon the front of this supplementary frame was placed the finger-bar and cutting apparatus; a simple device was used for raising or lowering the cutters from the ground. This machine is fully shown in the drawing in the record and in the skeleton engraving on the opposite page (plate II). The device exhibits two frames, the secondary frame being shown with the cutting apparatus raised from the ground, and again by dotted lines with the same apparatus depressed for cutting nearer to the earth. This machine was also constructed with a self-raking apparatus. The patentee declares in his specification that :

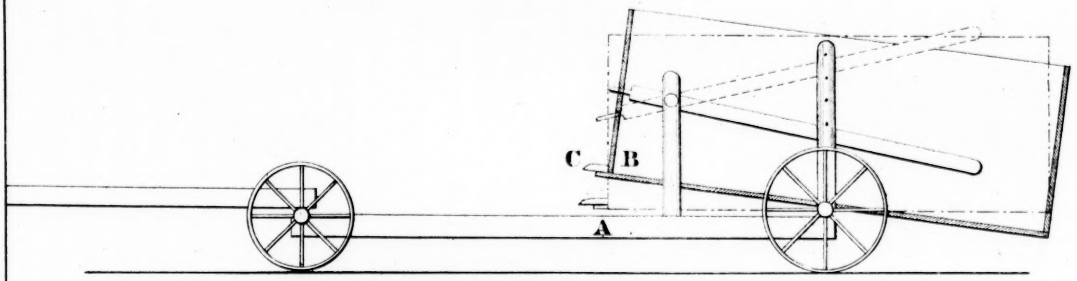
Plate II.



A. *Cutting apparatus raised.*
B. „ „ *lowered.*
C. *Main frame.*

PLATT MACHINE — JUNE 1849.

Plate III.



A. *Main frame.*
B. *Frame carrying Cutting apparatus.*
C. *Cutting apparatus.*

CHURCHILL - 1841.

"The frame D (carrying cutting apparatus, platform, rake, &c.) is raised and lowered upon the axle C, which acts as a fulcrum for the purpose of elevating and depressing the cutters to adapt them to cutting off the grain at different heights from the ground."

CHURCHILL'S MACHINE, patented in 1841, was for a "new and useful improvement in the mode of harvesting grain,' and belongs to thc class of machines called "headers," which cut the straw just below the head of the grain, leaving the straw, which upon the fertile prairies of the west is of comparatively of little value except as manure, standing in the field. As grain is of different hights, and is more or less bent or lodged, it was necessary in a machine of that kind to provide some device for raising and lowering the cutting apparatus. Accordingly the patentee says in his specification: "The forward end of the grain box, thresher, gatherer, etc., should be so arranged that it may be raised and lowered to suit the hight of the grain, all of which is represented in the accompanying drawings," &c. This was accomplished by making the frame in two parts, one supported by the driving wheel and a forward truck, the other carrying the cutting and gathering apparatus. The two were raised or lowered in relation to each other by a lever, and the hight was regulated by a post containing a series of holes to suit the different hights. This machine seems somewhat cumbrous because a threshing machine was combined with a reaper, and required more machinery to operate it. The parts, however, which were designed for cutting the grain, and especially those by which the cutting apparatus was raised or lowered, and which are shown in the sketch upon the opposite page (plate III), were exceedingly simple, and very nearly resembled those described in the patent of Byron Densmore.

CAVETT'S MACHINE, a patent upon which was applied for in 1852, was composed of two frames, one carrying the cutting apparatus,

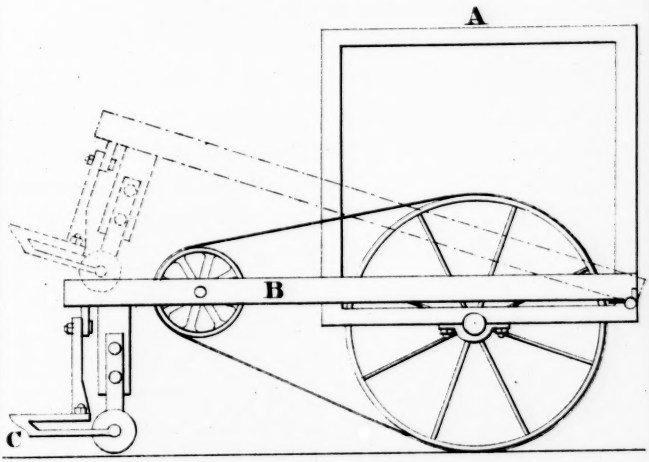
the other the driving wheel, power being communicated from one to the other, by means of a driving belt. The two frames were hinged together, and could be raised and lowered independently of each other as will clearly appear from the sketch upon the opposite page (plate IV).

Cavett, in describing his machine, speaks thus of its functions:

"When the machine is traveling over undulating ground, the the frame *j*, in rising or falling, will give play to the several cutters named, so as to cause them to ride over, with freedom, the uneven surface of the ground, and whatever the irregularities in the ground surface, to cut at any equal hight from the earth, and this accommodating rising and falling action is produced without necessarily affecting, in a similar manner, the entire machine, which from its weight when traveling over soft ground, is apt neither to rise or fall sufficiently with the specified inequalities of the surface."

It would seem that the field of invention which Densmore occupied had been very much narrowed by these and other prior devices. Certainly, he could no longer claim to be the inventor of the broad idea of two frames, or of placing the driving wheel in one frame and the cutting apparatus in another. All that was left for him, was to improve upon the modes of connecting the two frames, already known, or to improve the mode of operating them, or of locating them in new relations to each other or the other parts of the machine. As it happened, he did none of these things. He made no claim upon his double frame, but confined himself to his inventions in relation to the self-raker. His assignees have discovered that he did not know what he invented, and have sought to claim hanging the "driving wheel in a supplemental frame, or its *equivalent*, which is hinged at one end to this frame, while its opposite end may be adjusted and secured at various heights, or be left free, as desired; whereby the cutting apparatus may be held at any desired hight for reaping, *or be left free to accommodate itself to the undulations of the ground for mowing.*" It is true, that to this claim

Plate IV.



A. *Supplemental frame.*
B. *Main frame.*
C. *Cutting apparatus.*

CAVETT - 1852.

were appended the words "substantially as described." If by this is meant the particular device described by Densmore, applied in the particular way to produce the special result, I shall hardly quarrel with the construction, since it is obvious that the defendant would not then infringe the patent. But if it be sought to construe the claim so as to cover all modes of hanging the driving wheel in a separate frame from that which carries the cutting apparatus, then I answer that Mr. Densmore was not the first inventor of a device to do that thing, but that he had been anticipated by others.

One feature of this claim deserves special notice; it is contained in the words "or be left free to accommodate itself to the undulations of the ground for mowing." It is submitted that there is no foundation for the claim that the end of the supplementary frame can be "left free" to accommodate itself to the undulations of the ground. On the contrary, it is shown in the original patent, in connection with a post and holes and a pin passing through them, whereby the end of the supplementary frame is secured firmly at different heights, and not left "free" at all. This phrase seems to have been the invention of the assignees, and would seem to have been founded upon the notion that inasmuch as the pin could be put into the holes in the post, it might be left out altogether, although the patentee had described no such operation.

It must be obvious, I think, that the claim which is marked "first" in the reissued patent is a *single* combination, and that the claim was intended to cover a driving wheel hung in a supplemental frame, and so hinged at one end to the main frame that its opposite end may be adjusted and secured at various hights, "or be left free as desired." It would not satisfy this claim if a machine were used, in which the supplementary frame could not be left free as desired, or in which the same frame could not be secured at various hights as desired. The purpose of the assignees evidently was to cover the machine known as a "combined reaper and mower,"

which might be made by adjustment to serve the double purpose of reaping grain or cutting grass, and for this purpose they described the cutting apparatus as raised for reaping and left free for mowing. That they did not intend to make two claims, one for securing the supplemental frame at various fixed hights for reaping, and another for allowing it to vibrate freely for mowing, seems to be obvious from the fact that a second claim is inserted in the patent, which is distinctly referred to as "second," implying that the one which had preceded it was "first" and single.

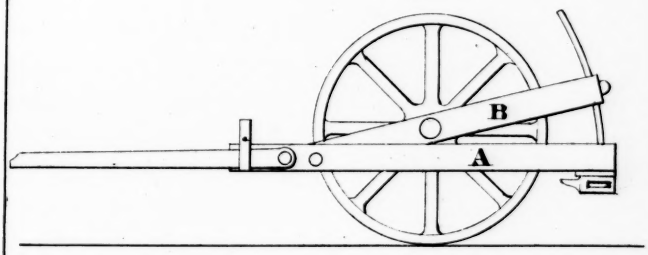
Turrill v. *Railroad*, 1 Wall, 491.

IV. INFRINGEMENT.

THE INFRINGEMENT was alleged to consist in the manufacture and sale by the defendants of a combined reaping and mowing machine, an outline of which will be found in figures 1 and 2 in the plate V on the opposite page. It is known as the "Champion Machine," and is manufactured under various patents granted to the defendants and others, the mode of hanging the driving wheel being particularly that described in the letters patent granted to Thomas S. Steadman, and reissued to the defendants in 1862. The reissues will be found in the record, and a copy of the drawings on the opposite page. The driving wheel of the defendants is hung in a supplementary frame, having this in common with Platt, Churchill, Cavett, and Densmore machines, but it contains a feature not found in any of those machines, which consists in the hinging of the supplemental frame to the pinion shaft of the machine, so that the frame will vibrate around the pinion shaft as a center. The effect of this is to enable the pinion to be placed upon the main frame, and

Plate V.

Fig.1.



A. *Main frame.*
B. *Supplemental frame.*

Fig.2.

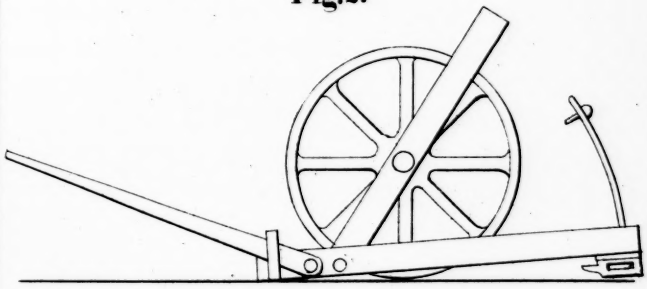


Fig.1. *Held by pin.*
„ **2.** *Pin out, left "free."*

DEFENDANT'S MACHINE.

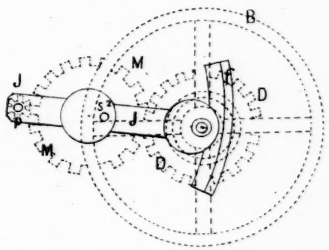


Figure 6.

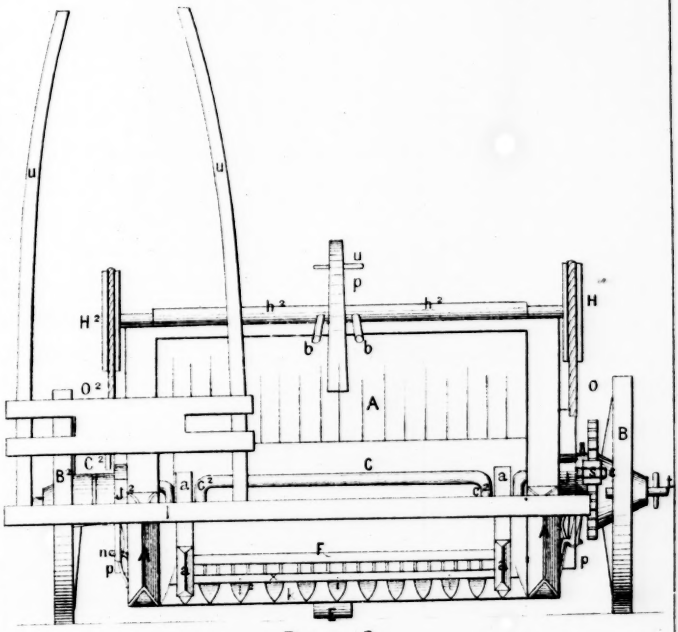


Figure 2.

REISSUES. (985 and 986)

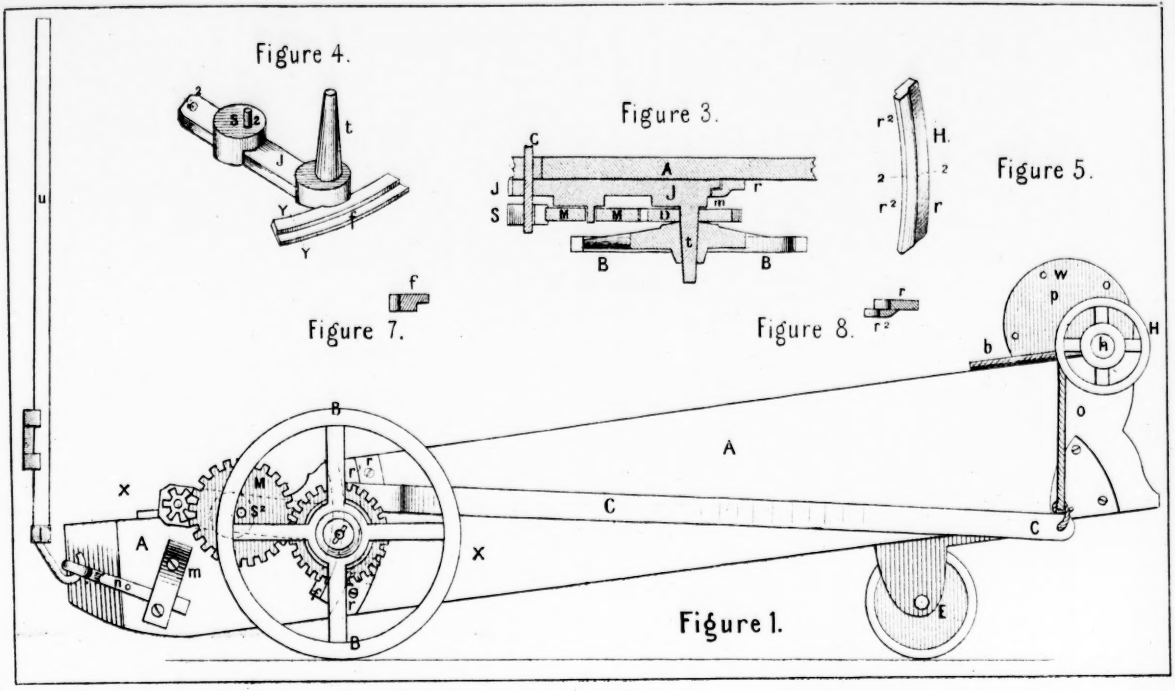


Figure 4.
Figure 3.
Figure 5.
Figure 7.
Figure 8.
Figure 1.
A
B
C
E
H
J
M
S
X
u
t
Y
f
r
r²
m
n
o
p
w
b
h

the driving wheel upon the supplemental frame, and yet to keep them always in gear, whatever may be their relations to each other. This feature is covered by the Steadman patent reissue 985. The claims of which are as follows:

What is claimed as the invention of the said Thomas S. Steadman, and is desired to be secured by letters patent, is the main frame or box A, which carries the pinion which drives the cutters in combination with the arm or supplementary frame (J), provided with axle (t), and the main wheel and gearing, substantially as described for the purposes specified.

I also claim the arm or supplementary frame, in combination with the master wheel and gearing, when said arm or supplementary frame is so connected with the main frame as to vibrate from and around the pinion shaft, substantially as shown and described for the purpose set forth.

The outer end of the supplementary frame is held at various hights by a pin which passes through it or above it, into an upright arc, but if the pin be removed and the outer end of the supplemental frame left free, the outer end of the supplemental frame will rise in the air, and the main frame of the machine will fall on the ground, as shown in Figure 2 of plate V. It is impossible to use the machine for any purpose, if, in the language of the first claim of the Densmore reissue, the opposite end of the supplemental frame "be left free as desired," or "be left free to accommodate itself to the undulations of the ground for mowing."

The proof upon this point is ample. The following witnesses have testified for the defendants upon this point.

EMANUEL RIEGEL says, speaking of defendants' machine (Record, p. 26):

Q. 8. "State whether or not the pin was ever taken out within

your knowledge, or designed to be taken out, from the construction of the machine, so as to leave the wheel free to move independently of the main frame, and so as to allow the frame and cutting apparatus to accommodate themselves to the ground, indepently of the wheel.

A. No; that never was the design in that way; if you did take the pin out, it, the main frame would drop on the ground and never do any cutting.

This witness also says that when the machine was used for mowing, "the tongue ran through the loop, and hinged on the bolt, and played loose in the loop or stirrup when mowing."

HENRY STICKNEY says (Record, p. 28):

Q. 5. Please state whether or not the wheel frame is left free to move when the machine is at work.

A. It is not; that not being the design.

Q. How do you know of that not being the design?

A. When instructions were given for using the machine, they were to the effect that the wheel frame should be stationary at various points on the uprights, as circumstances required.

The witness also says: "That the tongue is hinged when the machine is used as a mower."

HENRY OXTOBY says (Record, p. 29):

Q. 5. Please state if ever the yoke is left free to move up and down when the machine is at work.

A. No, sir; never.

SAMUEL SHUMAN says (Record, p. 30):

Q. Please state how you adjust your machine for reaping, and how for mowing.

A. For reaping, we lower the wheel frame on the standard by a pin passing through both the standard and wheel frame, which is always kept stationary when at work. As to the tongue, we move

the bolt as circumstances require, both in reaping and mowing, but always leave the tongue some play—less in reaping than in mowing. For mowing, we use the pin passing through the standard in the upper holes; for close mowing in the top hole. The machine will not run when the wheel frame is left loose.

J. W. HAYNES says, that in mowing they use a limber tongue. (Record, p. 30.)

Q. 5. Please state if the pin is ever taken out and the wheel frame left free, so that the main driving wheel and main frame work independently of each other.

A. No, sir; we always use the pin in.

ISAAC SHANK says (Record, p. 39):

Q. 4. In what manner do you arrange the yoke and standard for mowing? Whether rigid or loose?

A. Rigid.

Q. 9. Do you use the tongue of your machine for mowing loose or rigid?

A. Loose.

ISAAC N. KYLE says (Record, p. 40):

Q. 5. Have you ever used said machine, as a mower, with the pin drawn wholly from the standard?

A. In one or two instances I have forgotten to put in the pin when starting up as a mower; the effect was, the machine clogged up; the guards on the cutter-bar would run into the uneven surface of the ground; if the surface were even, it would, perhaps, run a few rods.

CHAS. D. MILLER says (Record, p. 41):

Q. 4. Have you ever used your machine with the pin withdrawn from the standard, so that the yoke played loose?

A. No; I never tried it in that way; I never made any mistakes.

HORATIO G. MILLER, having testified that he had witnessed an experiment with a machine when the pin was withdrawn, was asked. (Record, p. 44):

Q. 8. When the pin was thus withdrawn and the tongue loose, how was the main frame supported?

A. It lay upon the ground, but I don't remember whether it was the frame or cutter-bar. I think the entire length of the frame was on the ground when the tongue was loose.

Q. 9. How did the machine mow when the pin was thus out, with the tongue either rigid or loose?

A. Very badly. I would not regard it as a practical mower in either case, with the tongue either rigid or loose, with the pin out.

JOHN D. CLARK testifies (Record, p. 46) to the same experiment and says:

"They first took out the standard pin, and started the horses, and the machine would not mow. It ran up over the grass. The frame fell and threw the cutter-bar up. Then they put the pin in the second or third hole from the top of the standard. It mowed very nice then."

WM. O. DOWNS says (Record, p. 49):

"I have seen it experimented on with the wheel left free by taking out the pin. The effect was that the rear side of the main frame of the machine plowed up on the ground, and the outer end of the cutter bar rode up off the ground, I suppose about six or seven inches."

Q. 5. How does the machine operate when thus arranged?

A. It don't operate at all.

AMOS WHITELEY testifies as follows:

"I have attempted to use the machine in mowing with the yoke

free at the near end, but I failed to make the machine work, as I was unable to keep the cutter-bar on the ground, and found that there was not sufficient power in the machine to propel the knives to cut the grass with the machine in this position."

J. L. TAYLOR says (Record, p. 54) that he has seen the machine tried with the wheel left free :

"I started one mowing last week. I tried that experiment of letting the yoke go free with limber tongue. The result was that the outside of the frame ran into the ground. The front end of it and the outer end of the cutter-bar flew up. In fact, nearly the whole length of the bar was off the ground."

This is the testimony of thirteen witnesses, to a matter, not of opinion, but of fact. The complainant called five witnesses to prove that the defendants' machine might be operated if a pin were placed in the standard *above* the yoke instead of passing through it, but when it is remembered that the effect of the removal of the pin from the standard is to allow the yoke to fly up, it will be seen that placing the pin above the standard prevents the outer end of the supplemental frame from vibrating "freely"as effectually as if the pin passed through both standard and yoke. In fact, if the defendants' machine be used, as all these witnesses say it is, with a loose, or limber tongue, it is impossible to operate it in the mode described in the reissued patent of the complainants, and this was conceded by their experts, two of whom only were examined. One of them, CALVIN YOUNG, says (Record, p. 52):

Q. 14. When the screw (pin) is removed what becomes of the main frame ?

A. It rests upon the ground at one end—the rear end.

Q. 15. What becomes of the front end ?

A. If it had nothing to support it, it would rest on the ground.

Q. 16. How if the tongue was hinged to the front of the frame?

A. There would be nothing to support it if the tongue was hinged.

Q. 18. Then if the machine has a tongue loosely hinged, would you say that in practice it was ever intended that the outer end of the supplementary frame should be released from the upright arc in the rear of the machine?

A. No, sir.

The other expert, W. B. Dunning, thus testifies (Record, p. 24):

Q. 8. If the machine, illustrated by the model A, be drawn forward by a tongue hinged to the fore part of the frame, could it be used for mowing if the rear end of the supplementary frame were left free?

A. If the hinge was of sufficient play, and the diameter of the wheel was not of sufficient length to keep the frame up from the ground, the machine could not be used in that case.

Both of these witnesses declare that they have never seen the machine operate. This is all the testimony upon the question of infringement. It is submitted that it appears beyond controversy that defendants' machine does not perform the functions described in the reissued patent by the means described, or by any other means, and therefore does not and can not infringe.

SAMUEL S. FISHER,

of Counsel for Appellants.

United States Circuit Court,

SOUTHERN DISTRICT OF OHIO.

William N. Whitely

versus

William Swayne.

OPINION OF JUDGE LEAVITT.

THIS is a bill in equity brought by William N. Whitely, for an alleged infringement of reissued patents 985 and 986, dated June 19, 1860, granted to Whitely as the assignee of T. S. Steadman. The patent to Steadman is dated May 23, 1854, and purports to be for "a new and useful improvement in clover and grass-seed harvesters." The infringement alleged is in vending a machine known as the "Kirby Harvester," patented to William A. Kirby and David M. Osborne, assignees of Byron Densmore, on February 10, 1852. The bill prays for an injunction restraining the defendant from the sale of the Kirby Harvester, and for an account of profits arising from the infringement complained of. The allegations of the bill are general as to the infringement, and there is no statement or specification of the parts or elements of the machine sold by the defendant, which infringes the machine described in said reissued patents.

The amended answer of the defendant sets up three several grounds of defense to the bill, which are in substance: 1. That the said reissued patents under which the complainant claims, are void as having been granted without a compliance with the pre-requisites of the patent laws, and also for fraud in their procurement; 2. That the improvements claimed by Steadman in his patent, and by the complainant as embraced in the reissues, are not new, but had been patented and known to, and in use, prior to the date of Steadman's patent; 3. That the machines sold by defendant do not infringe any of the devices described and claimed by Steadman as his invention, or covered by the reissues to Whitely as his assignee.

The legality and validity of these reissues will first be considered. If they are successfully impeached on either of the grounds stated, the complainant's bill can not be sustained, and there will be no necessity for passing on the questions of novelty and infringement.

The intelligent consideration of the character, force, and effect of these reissues, requires some reference to the history of Steadman's invention, as presented by the proofs and exhibits before the Court. These show that on June 13, 1852, Steadman filed a caveat in the Patent Office in which he claimed to have discovered some new and useful improvement in a machine for "harvesting clover and grass seed." The main element of the invention claimed was a device or mechanical arrangement for raising and lowering the main frame or box, with the cutting apparatus, while the machine was in operation, without interfering with the meshes of the system of cog-wheels used as a part of the machinery.

On February 5, 1853, Steadman filed a formal application for a patent for the improvements claimed as his invention. In this application the name of the machine is

the same as in the caveat. On February 2, 1854, the Commissioner of Patents returned the papers to Steadman, with a letter informing him that his application had been rejected. The reasons for the rejection do not appear. On February 23, Steadman by letter withdrew his application, and at the same time transmitted a new application, which was filed in the Patent Office March 4, 1854. The name of his invention was the same in this application as in that previously filed, namely: "New and useful improvements for harvesting clover and grass seed." The specification accompanying the second application, differs in some important particulars from the first. He states his claims under the new application as follows: 1. The arrangement of the cutters in combination with the comb, operating in the manner and for the purpose described: 2. The rake *S* in combination with the cutters, as described; 3. Certain levers or pulleys arranged for raising or lowering both sides of the machine when in motion, and by which the ground wheels are retained in their place while the box is passing over stones or other obstructions.

On April 14, 1854, the Commissioner of Patents returned these specifications for correction. By a letter of that date Steadman is informed that his third claim is rejected, for the reason that he had been anticipated in all the devices claimed in it as new, and that they had been patented to other inventors. The third claim was therefore erased; and on May 23, 1854, a patent issued embracing only the first and second claims, as before set forth.

These are all the facts which it is important here to notice in connection with the emanation of Steadman's patent. And here it will be proper to notice the evidence before the Court, as to the operation and practical value of the machine thus patented to Steadman. The witness on this subject is Frederick Hatch, who lived in the same

town, in the state of New York, in which Steadman resided, and who was familiar with the progress of his invention, and who states fully the various modifications and improvements made by Steadman in his machine prior to the date of his patent. He lived in the immediate vicinity of Steadman's shop, and was frequently in it, witnessing his efforts to perfect his machine. The first machine made by Steadman, the witness thinks, was in the year 1850. He made two others, the last one in 1853 or 1854. The witness does not say positively that the last one was made after the patent issued, but the inference is strong from all the facts stated, that it was so made. He states that he was an eye-witness to the practical working of the machine last made. It was used in his father's field in gathering clover seed, but was a failure for that purpose. It took off only about half the heads of clover, much of which flew over the box of the machine. The witness also states that the machine was not so constructed as to run on the ground, and was designed simply to take off the heads of clover, and that he had no knowledge that it was used for any other purpose. He states also, that the three machines made by Steadman were sent to different places, and he does not know what became of them. There is no evidence before the Court that they were used, or could be used, as practical implements for harvesting clover and grass seed; nor is it claimed by the complainant that they were available for that purpose.

The fact next to be noticed in the history of this patent is the application to the Patent Office by the complainant, as the assignee of Steadman, for a reissue based on that patent. His petition for this purpose was filed April 2, 1860, nearly six years after the date of Steadman's patent. He asks to be allowed to surrender that patent, and that three new letters patent may issue to him for separate

parts of the invention. He recites in the petition, that letters patent were granted to Steadman, May 23, 1854, "for improvements in harvesting machines," and that they were assigned to him December 27, 1859. This petition was accompanied by a specification dated March 27, 1860, signed by complainant in the presence of two witnesses, and sworn to before a justice of the peace in the state of Ohio. There are some peculiarities connected with this application and specification, and the action of the Patent Office in relation to them, which deserve special notice as bearing upon the question of the legality of the reissues to the complainant, and the allegation of unfairness or fraud in obtaining them. Copies of these papers are among the exhibits in the case, duly authenticated by the certificate of the Commissioner and the seal of the Patent Office. In connection with these papers, the deposition of Homer Peck, then an examiner in the office who passed upon the application of the complainant, is also before the Court. From these it appears the examiner was so fully satisfied that the description of the improvements alleged to have been the invention of Steadman, as contained in the complainant's specification first filed, involved such a departure from the original invention and claim, that he ordered the whole to be stricken out, and a specification entirely new, to be filed. A copy of this specification, as cancelled by the examiner, is among these exhibits. I do not propose, nor is it necessary for the purpose of the inquiry now before the Court, to recite this specification and claim. It is of great length, and details with great minuteness, the invention for which the complainant sought for a reissue. One fact, however, may be noted as very significant, that in this specification the complainant persisted in calling Steadman's invention an improvement in "harvesting machines." The witness Peck, states very fully

in his deposition, the reasons for the rejection of the complainant's specification. He objected to the title of "harvesting machines," by which Steadman's improvement was designated by the complainant, and required the name given by Steadman, namely: "An improvement in clover and grass seed harvesters," to be used. He gives as the reason for this, "that the machine was so constructed as to be incapable of the functions of harvesting grass or grain as a reaping or mowing machine." The witness states very minutely, various other terms and forms of expression used by the complainant in his first specification, as wholly inadmissible, and not within the scope or meaning of the improvements as claimed and patented to Steadman. It may be noticed here, that the witness Peck, states distinctly in answer to a question put to him, that the machine described by Steadman could not be successfully used as a reaper or mower, and he gives very clear reasons as the basis of this opinion.

As before stated, so decisively objectionable were the specification and claim of the complainant as embracing an entirely different invention from that patented to Steadman, that the whole was stricken out and cancelled, except the name of the complainant subscribed to the specification, and the names of the attesting witnesses. And on June 4, 1860, a new specification was filed by the complainant as a substitute for the original, which was not sworn to by the complainant, or attested by witnesses. Upon this new specification and the claims appended to it, the reissued patent 985 was finally granted by the Commissioner. I do not propose here to notice the description of the improvement, or the specific claims on which this patent issued. Nor is it necessary to notice separately the facts connected with reissue 986 as a part of the history of the patents under which the complainant

claims. They are essentially the same as those referred to in connection with reissue 985. And all the legal grounds of objection apply equally to both.

The points of inquiry on the facts before the Court, as already stated, are: 1. Whether the statute on the subject of reissued patents in all its material requirements has been complied with. 2. Whether these reissues were unfairly or fraudulently obtained.

The 13th section of the Patent Act of 1836 provides: "That whenever any patent which has heretofore been granted, or which shall hereafter be granted, shall be inoperative or invalid by reason of a defective or insufficient description or specification, * * * if the error has or shall have arisen by inadvertence, accident, or mistake, and without any fraudulent or deceptive intention, it shall be lawful for the Commissioner, upon the surrender to him of such patent, * * * to cause a new patent to be issued to the said inventor, for the same invention for the residue of the period, then unexpired, for which the original patent was granted, in accordance with the patentee's corrected description and specification." A subsequent part of the section declares that in case of the death of the patentee, or an assignment of the original patent, the right to surrender and to a reissue shall vest in the executor, administrator, or assignee.

The points of inquiry before the Court, as already stated, are: 1. Whether the essential requirements of the statute as to the reissues have been complied with. 2. Whether the inference of unfairness or fraud in obtaining the reissues, is sustained by the facts.

As to the first of these inquiries, it is insisted by the counsel for the complainant, that the decision of the Commissioner of Patents in granting the reissues, is conclusive, and that the Court can not look into anything that trans-

spired antecedently to the grant, to impeach the validity of the reissued patent. This is undoubtedly the settled law in this country, so far at least as the identity of the original invention, and the invention as described and claimed in the application for the reissue, unless fraud in the transaction is alleged. The Commissioner is supposed to have all the qualifications necessary to an intelligent decision of that question, and there are strong reasons why his action should be regarded as final. Such, I understand to be the doctrine of the Supreme Court of the United States, as announced in numerous reported cases. 4 How. 404; 15 How. 62; 17 How. 84; Law's Dig. 617. But I am not aware that the Supreme Court have decided in any case that it is not competent to inquire whether the Commissioner has exceeded his authority in granting a patent without a compliance with the requirements of the statute. He has clearly no power to dispense with what the statute declares to be necessary pre-requisites to the grant. And if it appears from the papers and records of the office in evidence, that the statutory requirements have not been complied with, it is within the power of a court, and its plain duty, to hold the patent to be void. Such was the doctrine announced by Judge Hall in the case of *Ransom* v. *The Mayor, etc. of New York*, Law's Dig. App. 57. The learned judge says: "things specified in this section (6th section of the Act of 1836) are pre-requisites to the granting of a patent, and unless these pre-requisites are complied with, a party sued for an infringement of the patent, may show that they have not been complied with, and in that mode defeat the action of the supposed inventor." The soundness of this doctrine can not be successfully controverted. It would be straining the doctrine of presumptions in favor of the legality of the acts of a public officer to an unreasonable extent,

to hold that a patent is legal and valid where the records and papers of the office show conclusively that essential statutory provisions had been disregarded.

Now, it is clear there were at least two of the important requisites of section 13 of the Act of 1836, before quoted, in relation to reissues, which were not complied with by the complainant in obtaining his reissues. 1. He does not aver in his bill, or make oath in his application, nor does it otherwise appear, that Steadman's invention as patented, was "inoperative or invalid," in the sense of those terms as used in the statute. The allegation in the bill is merely "that the description and specification of the said patented invention being defective and insufficient * * * said patent was by your orator returned," etc. Nor did the complainant in his application for a reissue make oath that the patent to Steadman was "inoperative or invalid" for any reason whatever. He swears "that he verily believes that by reason of an insufficient or defective specification, the aforesaid letters patent granted to T. S. Steadman, is *not fully valid and available to him.*" The statute requires as a condition on which a reissue shall be granted, that the original patent shall have been "inoperative or invalid by reason of a defective or insufficient description or specification, if the error has or shall have arisen by inadvertence, accident, or mistake, and without any fraudulent or deceptive intention." The complainant did not make the oath required by the statute; nor was there any evidence before the Commissioner of Patents proving that the Steadman patent was "inoperative or invalid," for the reason stated in section 13, or for any other reason. And the reason why this oath was not made, and could not be made, is most obvious from the evidence before the Court. The patent to Steadman was not "inoperative or invalid" by reason of a defective or

insufficient specification. The machine described by him, with the improvements claimed as his invention, was just as efficient for the purpose for which it was designed, viz: the "harvesting of clover and grass seed," as from the description of his mechanical devices it was capable of being. That it failed in its practical operation for that purpose, was not owing to any "defective or insufficient description or specification," but to inherent defects or infirmities in the structure, which prevented it from being practically useful for the purpose for which it was invented. And that it was not owing to any defect in his description or specification is proved by the fact that Steadman, after the machine failed on trial, never made an effort to perfect it by an amended specification. It is moreover apparent from the fact that the machine as described in the complainant, Whitely's, specification, upon his application for a reissue, was no more available as a harvester of clover and grass seed than when constructed according to Steadman's specification. There is no pretense that the complainant, after the reissues to him, ever constructed a machine according to his specification, or authorized any other person to make, use, or vend the machine under his patent. In fact, the presumptions, as will be noticed hereafter, are strong that he never intended to use the patented machine.

It is clear, therefore, that these reissues, for the reason stated, were not granted in accordance with the statute. The Steadman patent was not inoperative or invalid, in the sense of the statute; and the oath of the complainant that it was not "fully valid and available to him," is not the equivalent for the oath required by law. The statute embraces only the right to a reissue where from an unintentional error in the description of the invention, the patent is wholly "inoperative or invalid." It is not

enough that the applicant for the reissue should swear, or prove, that the patent is not *fully* valid and available to him. This does not meet the clear and explicit requisition of the statute; and it was an excess of authority on the part of the Commissioner to grant a patent upon such an oath.

There is, however, another fatal objection to these reissues based on the fact proved by the exhibits in the case, that no oath appears to have been made to the specification on which the reissues were granted. Neither Steadman the patentee, nor the complainant as assignee, has made such oath. The facts in relation to the application for the reissue, have already been referred to. They appear fully from the deposition of Peck, the Patent Office examiner, and the *fac simile* copies of the papers in the Patent Office. From these the proof is clear that the original specification was prepared by the complainant and sworn to in Ohio, before a justice of the peace of that state. It was forwarded to the Patent Office, and upon examination was found to be, substantially, an application for a patent for a *grain harvester and mower*, instead of an implement for gathering clover and grass seed as before noticed. The description of the alleged improvements was so palpably variant from the invention described by and patented to Steadman, that the examiner rejected it and ordered the entire paper to be cancelled, and every part of it was stricken out except the formal beginning and the conclusion. A new specification was then prepared as the basis of the reissues applied for, and filed as a substitute for the original. And the description of of the improvement, as contained in the substitute, was in many essential particulars, different from the original. But the substituted specification was not sworn to, either by the patentee or the assignee. I shall not here examine

or decide whether, upon an application by an assignee for a reissue, the patentee being alive and no reason being shown why he did not verify the specification by his oath, the oath of the assignee is a compliance with the statute. It is not controverted that the oath either of the assignee or patentee is required by the statute and by the rules of the Patent Office. And it results clearly, that the disregard of this statutory requirement invalidates these reissues. There are other exceptions to the reissues, on the ground that the pre-requisites of the statute have not been complied with, which I do not think it necessary to notice or discuss.

The important question whether these reissues were fraudulently obtained, and therefore void, is yet to be considered. If there is any doubt as to the correctness of the conclusion just announced on the question discussed, it would seem there could be none as to the fraudulent purpose of the complainant in procuring the assignment from Steadman, and in his application for reissues based on his patent. I do not propose the discussion of all the points in the case, connected with the question of fraud. There are some general aspects of the subject that seem entirely conclusive. There can be no doubt that the complainant procured the assignment from Steadman with full knowledge that the machine for improvements, on which the patent issued, was a machine for harvesting clover and grass seed, as the name in the patent indicated, and for nothing else. It may also be presumed that he was aware that for that purpose it was practically unavailable. The testimony on this point has been referred to in a previous part of this opinion, and need not be repeated here. The evidence is clear, that upon actual trial, Steadman's machine failed to answer the expectations of the patentee. No more than three of the machines were ever made by

Steadman; and the proof is, that the last trial of the machine took place in 1853 or 1854, when it was wholly abandoned as worthless.

Until the year 1860, it seems to have been, if not among the *lost arts*, at least among the *lost things* of earth. The complainant, by means not proved in the case, obtained knowledge of the existence of Steadman's patent, and in 1860, obtained an assignment. What consideration he paid, if any, does not appear. It may be presumed it was merely nominal. But the complainant was doubtless aware that although Steadman's invention was worthless for the only purpose for which it was intended, the patent was nevertheless valid, and could be assigned in law. There is no reason to suppose that the complainant, in procuring the assignment, intended to avail himself of the machine as a clover seed and grass harvester. This is apparent from the fact that he has not constructed, or authorized others to construct, the machine since the assignment. The irresistible inference, therefore, must be—and this inference is sustained by his subsequent conduct—that his intention was to surrender the patent, and by some artful change in the description of the machine, some additions to the devices described and claimed by Steadman, to obtain reissues enlarging the scope and operation of his invention, and thus to metamorphose the machine into a grain harvester; or, if that failed, so to change the specification as to cover certain elements and combinations then used, or to be used, in grain harvesters and mowers, or other machines; and thus to lay those constructing, vending, or using such machines, under contribution to him as infringers of his reissued patents. If such was the purpose of the complainant, his conduct was tainted with fraud from the beginning. And in confirmation of this, I quote the following from the opinion of

the Supreme Court in the case of *Brooks et al.* v. *Fisk et al.*, 15 How. 220: "It is deemed proper to remark that the fact of procuring a patent for a new and useful machine in 1845, under the assumption of a reissue, which was not useful as patented in 1828 for want of feed and pressure rollers, now used as alleged in defense, would present a question of fraud committed on the public by the patentee by giving his reissued patent of 1845, date as an original discovery made in 1828, thereby overreaching similar inventions made between 1828 and 1845."

Now, it is clear that the facts do show that it was at first the design of the complainant, by means of reissued patents to be obtained under Steadman's patent for improvements in a clover and grass seed harvester, to acquire an exclusive right for an operative and practical grain harvester and mower, which should date back to the emanation of Steadman's patent of 1854; and, thus make all liable as infringers who, after that time, had used any of the parts or elements of the devices or combinations covered by his reissues. It clearly appears that in the complainant's original specification accompanying his application for reissues, such was his design. In that he designates Steadman's invention as a "harvesting machine," and he describes devices, and uses terms and forms of expression only applicable to such a machine. As already stated, this specification was rejected by the examiner of patents, and for reasons contained in his letter of April 19, 1860, in which he informs the complainant that "the description enlarges the scope of the invention so as to embrace other distinct improvements invented and subsequently patented by others." This was the exact case put by the Supreme Court in the case of *Brooks et al.* v. *Fisk et al.* before referred to, as constituting a fraudulent reissue.

It can not be denied that this was a very bold attempt, through a reissue, to practice a fraud on the Patent Office and the public. And as showing the animus of the complainant, it throws a cloud over his conduct as connected with this transaction. Though foiled in his purpose of metamorphosing the Steadman invention into a reaper and mowing machine, and getting reissued patents covering devices and combinations that never entered into Steadman's brain, and which he did not therefore claim, and some of which had been previously patented to other persons, he made another attempt by other means, to accomplish his purpose. His first application being rejected as wholly inadmissible, he filed another with the hope and intention, by an artful description of Steadman's patented invention, in which his claims were to be ingeniously modified, enlarged, and misstated, to convince the Patent Office that his claim to a reissue was for the "same invention," to obtain patents substantially embracing some of the important elements and devices of a grain harvester, then well known and extensively used. The object was palpable, namely: to subject those making, selling, or using such harvesters, or other machines with similar devices and combinations, to liability as infringers of his reissued patents. This is what Judge Grier, in delivering the opinion of the Supreme Court in the case of *Burr* v. *Duryee*, 1 Wall. 580, very aptly says is entitled to rank "*inter ingenuas artes.*" Strangely enoughhe succeeded in procuring from the Patent Office, no less than three reissued patents for alleged separate parts of Steadman's simple claims to improvements in a machine for gathering clover and grass seed by cutting, or more properly, pulling off the seed heads and depositing them in a box forming a part of the machine.

It is not proposed to analyze critically the claims covered

by Steadman's patent, as contrasted with those contained in the complainant's reissues. It will be enough to state them to convince any one that they are not identical and do not describe the same invention. It has been before noticed, that the two claims of Steadman's patent were: "First: The arrangement of the cutters in combination with the comb, operating in the manner and for the purpose described. Second: The rake *S* in combination with the cutters described." The third claim, which related to the devices for raising and lowering the machine when in motion, was rejected at the Patent Office as wanting novelty, and being covered by other patents. It is plain from this—and such is the evidence—that these claims pertained to a clover and grass seed harvester, and could not be used for any other purpose. But these simple claims are swelled into large dimensions under the ingenious manipulations of the complainant. In the reissue 985 he says: "What is claimed as the invention of the said Thomas S. Steadman, and is desired to be secured by letters patent, is the main frame or box *A*, which carries the pinion which drives the cutters, in combination with the arm or supplementary frame *J*, provided with the axle *t*, and the main wheel and gearing as described for the purposes specified. I also claim the arm or supplementary frame in combination with the master wheel and gearing when said arm or supplementary frame is so connected with the main frame as to vibrate from and around the pinion shaft, substantially as shown and described for the purpose set forth."

And in his claim for reissue 986, the complainant says: "What is claimed as the invention of the said Thomas S. Steadman, and is desired to be secured by letters patent is, in combination with the main frame or box *A*, an arm or supplementary frame *F*, on which is formed or secured

the master-wheel axle, the employment of a retaining arc *H*, or its equivalent, the whole constructed or arranged in such a manner that the main frame or box, and arm or supplementary frame with its master-wheel axle, will be held in parallel planes relatively to each other while they are moving up and down, substantially as and for the purposes herein set forth." There was a third reissue for another part of Steadman's invention not in controversy, and which need not be set forth.

Now, the proof is clear, that the improvements in the clover and grass seed machine, as patented to Steadman, and the entire machine with these improvements, was wholly incapable of performing the functions of a grain harvester or mower. The testimony of the witness Peck, and other witnesses, is explicit on this point. Yet the complainant in his specifications and claims, connected with his reissues, has described and claimed as the invention of Steadman, devices and combinations never conceived of by him. And this obviously for the fraudulent purpose of including devices and combinations used in perhaps all the grain harvesters and mowers in the country. I do not think it important minutely to compare the claims and devices of Steadman, as patented to him, and those described and claimed by the complainant as the basis of his reissues. That there is no substantial identity between them, sufficiently appears from reading the two. It is moreover apparent from the fact that Steadman, while the owner of his patented invention, never claimed or pretended, that it was infringed by any grain harvester or mower then known. From the date of his patent in 1854 until the reissue to the complainant in 1860, no such claim or pretense was set up by Steadman. Yet, the complainant now, under the sweeping reach of

his claims, and the allegation that they include Steadman's invention, and nothing more, has sued a vender of the Kirby grain harvester, as an infringement of his reissue. It seems clear to the Court that this is a fraudulent abuse and perversion of the statute regulating and allowing reissues.

It is gratifying to know that the Supreme Court of the United States have evinced, in their late decisions, a laudable determination to arrest the abuses and frauds which are of such frequent occurrence under the statute allowing reissued patents. In the case of *Burr* v. *Duryee*, 1 Wall. 577, Judge Grier, in giving the opinion of the court, says:

"The surrender of valid patents, and the granting of reissued patents thereon, with expanded or equivocal claims, where the original was clearly neither 'inoperative or invalid,' and whose specification is neither 'defective or insufficient,' is a great abuse of the privilege granted by the statute, and productive of great injury to the public. This privilege was not given to the patentee or his assignee, in order that the patent may be rendered more elastic or expansive, and therefore more 'available' for the suppression of all other inventions."

These remarks seem to apply with great force to the present case. No one can claim that under the original patent to Steadman there is a single element described by him, that is infringed by the Kirby grain harvester, and if by the "elastic or expansive" power of his reissues, he has succeeded in bringing that machine, and other similar machines, within the scope and operation of his patents, it is an abuse of the right of a reissue, equivalent to a positive fraud.

For the reasons stated, the complainant's bill must be

dismissed. I have not thought it necessary to inquire into or pass any judgment upon, the issues made in regard to the questions of infringement or novelty. The evidence on these points is voluminous, and in some respects conflicting. I have examined it carefully, but am not prepared to give a definitive opinion. Though I may say, that, as to the infringement alleged, the evidence at least renders it exceedingly doubtful whether it is made out.

I have only to add, in conclusion, that I am unwilling, unless the facts and the law imperatively demand it, to put into the hands of the complainant the opportunities which a decree in his favor would afford, of pursuing and annoying others for the alleged infringement of the rights secured to him by his reissued patents. I can not shut my eyes to these results. This bill asks for an injunction against the defendant to restrain him from selling the Kirby harvester, and for an account of profits. A decree against him as a mere vender of that machine, except as to costs, would not probably affect his interests to any very serious extent. But can it be doubted that with a decree in his favor in this case, establishing the legality and validity of his reissues, the complainant would at once proceed against all manufacturers, and all who vended or used the machine, unless they would pay tribute to him. Those who did not choose to submit to his terms, would be visited with injunctions, and otherwise annoyed, greatly to their injury and that of the public. The Kirby harvester is a very popular and useful labor-saving agricultural implement, and is extensively manufactured in various parts of the country. I can not consent to render a decree based on a claim of such doubtful equity as that asserted by the complainant, which in its results

may lead to the stoppage of these manufactories, and involve their proprietors in the most vexatious and expensive litigations. I am unable to perceive that the complainant has made out a case of such clear and palpable equity, as will justify a decree involving such consequences.